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**FIGURE 318**

GAGCCTGACTTCAGCGCTCCCACTCTCGGCCGACACCCCTCATGGCCAACCGTTACACCATGGATCTGACTGCCA  
TCTACGAGAGCCTCCTGTCGCTGAGCCCTGACGTGCCCGTGCCATCCGACCATGGAGGGACTGAGTCCAGCCCAG  
GCTGGGGCTCCTCGGGACCCTGGAGCCTGAGCCCTCCGACTCCAGCCCGTCTGGGGTACCTCCCGCCTGCCTG  
GCCGCTCCACCAGCCTAGTGGAGGGCCGCAGCTGTGGCTGGGTGCCCCACCCCTGGCTTCGCACCGCTGGCTC  
CCCGCCTGGGCCCTGAGCTGTCACCCTCACCACTTCGCCCACTGCAACCTCCACCACCCCTCGCGCTACAAGA  
CTGAGCTATGTCGGACCTTCTCAGAGAGTGGGCGCTGCCGCTACGGGGCCAAGTGCCAGTTTGCCCATGGCCTGG  
GCGAGCTGCGCCAGGCCAATCGCCACCCCAAATACAAGACGGAACCTCTGTCACAAGTTCTACCTCCAGGGCCGCT  
GCCCCTACGGCTCTCGCTGCCACTTCATCCACAACCTAGCGAAGACCTGGCGGGCCCCGGGCCACCCTCCTGTGC  
TTCGCCAGAGCATCAGCTTCTCCGGCCTGCCCTCTGGCCGCCGGACCTCACCACCACCACCAGGCCTGGCCGGCC  
CTTCCCTGTCTCCTCCAGCTCCTTCTCGCCCTCCAGCTCCCCACCACCACCTGGGGACCTTCCACTGTCAACCTCTG  
CCTTCTCTGCTGCCCTGGCACCCCCCTGGCTCGAAGAGACCCACCCAGTCTGTTGCCCTCCTGCCGAAGGG  
CCACTCCTATCAGCGTCTGGGGGCCCTTGGGTGGCCTGGTTCGGACCCCTCTGTACAGTCCCTGGGATCCGACC  
CTGATGAATATGCCAGCAGCGGCAGCAGCCTGGGGGGCTCTGACTCTCCCGTCTTCGAGGCGGGAGTTTTTGCAC  
CACCCCAGCCCGTGGCAGCCCCCGGCGACTCCCCATCTTCAATCGCATCTCTGTTTCTGAGTAGACAAAAGTGACT  
GCCCCGTCAGATCAGCTGGATCTCAGCGGGGAGCCACGTCTCTTGCACTGTGGTCTCTGCATGGACCCAGGGCT  
GTGGGGACTTGGGGGACAGTAATCAAGTAATCCCTTTTCCAGAATGCATTAACCCACTCCCCTGACCTCACGCT  
GGGGCAGGTCCCCAAGTGTGCAAGCTCAGTATTCATGATGGTGGGGATGGAGTGTCTCCGAGGTTCTTGGGGG  
AAAAAAAAATTGTAGCATATTTAAGGGAGGCAATGAACCTCTCCCCACCTCTTCCCTGCCCAAATCTGTCTCCT  
AGAATCTTATGTGCTGTGAATAATAGGCCTTCACTGCCCCCTCCAGTTTTTTATAGACCTGAGGTTCCAGTGTCTCC  
TGGTAACTGGAACCTCTCCTGAGGGGGAATCCTGGTGCTCAAATTACCCTCCAAAGCAAGTAGCCAAAGCCGT  
GCCAAACCCACCCATAAATCAATGGGCCCTTTATTTATGACGACTTTATTTATTCTAATATGATTTTATAGTAT  
TTATATATATTGGGTCGTCTGCTTCCCTTGATTTTTCTTCCTTTTTTTGTAATATTGAAAACGACGATATAATT  
ATTATAAGTAGACTATAATATATTTAGTAATATATATTATTACCTTAAAAGTCTATTTTTGTGTTTTGGGCATTT  
TTAAATAAACAATCTGAGTGT

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**FIGURE 319**

MDLTAIYESLLSLSPDVPVPSDHGGTESSPGWGSSGPWSLSPSDSSPSGVTSRLPGRSTSLVEGRSCGWVPPPPG  
FAPLAPRLGPELSPSPTSPTATSTTPSRYKTELCRTFSESGRCRYGAKCQFAHGLGELRQANRHPKYKTELCHKF  
YLQGRCPYGSRCHFIHNPSEDLAAPGHPPVLRQSI SFSGLPSGRRTSPPPPGLAGPSLSSSSFSPSSSPPPPGDL  
PLSPSAFSAAPGTPLARRDPTPVCCPSCRRATPISVWGPLGGLVRTPSVQSLGSDPDEYASSGSSLGGSDSPVFE  
AGVFAPPQPVAAPRRLPIFNRI SVSE

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**FIGURE 320**

GCACGATGAGCTCAATCGGCACTGGGTATGACCTGTCAGCCTCTACATTCTCTCCTGACGGAAGAGTTTTTCAAG  
TTGAATATGCTATGAAGGCTGTGGAAAATAGTAGTACAGCTATTGGAATCAGATGCAAAGATGGTGTTGTCTTTG  
GGGTAGAAAAATTAGTCCTTTCTAACTTTATGAAGAAGGTTCCAACAAAAGACTTTTTTAATGTTGATCGGCATG  
TTGGAATGGCAGTAGCAGGTTTGTGGCAGATGCTCGTTCTTTAGCAGACATAGCAAGAGAAGAAGCTTCCAAC  
TCAGATCTAACTTTGGCTACAACATTCCACTAAAACATCTTGCAGACAGAGTGGCCATGTATGTGCATGCATATA  
CACTCTACAGTGCTGTTAGACCTTTTGGCTGCAGTTTCATGTTAGGGTCTTACAGTGTGAATGACGGTGCGCAAC  
TCTACATGATTGACCCATCAGGTGTTTCATACGGTTATTGGGGCTGTGCCATCGGCAAAGCCAGGCAAGCTGCAA  
AGACGGAAATAGAGAAGCTTCAGATGAAAGAAATGACCTGCCGTGATATCGTTAAAGAAGTTGCAAAAATAATTT  
ACATAGTACATGACGAAGTTAAGGATAAAGCTTTTGAAGTAGAAGTCTAGCTGGGTTGGTGAATTAATAATGGAA  
GACATGAAATTGTTCCAAAAGATATAAGAGAAGAAGCAGAGAAATATGCTAAGGAATCTCTGAAGGAAGAAGATG  
AATCAGATGATGATAATATGTAACAATTTACTCCAGCATCTATTGTATTTTAAATTTCTACTCCAGTCCAATGTAA  
CTATTTAGCCCTG

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**FIGURE 321**

MSSIGTGYDLSASTFSPDGRVFQVEYAMKAVENTSSTAIGIRCKDGVVFGVEKLVLSKLYEEGSNKRLFNVD RHVG  
MAVAGLLADARSLADIAREEASNFRSNGYNIPLKHLADRVAMYVHAYTLYSAVRPFGCSFMLGSYSVNDGAQLY  
MIDPSGVSYGYWGCAIGKARQAAKTEIEKLQMKEMTCRDIVKEVAKIIYIVHDEVKDKAFELELSWVGELTNGRH  
EIVPKDIREEAKEYAKESLKEEDESDDDNM



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**FIGURE 322**

GCACGAGGCTCCGCCTCGCTTGCTCCTGCCGGGCGTGCAGGGCCCCGCCGCCGCC**ATG**TCGGGCTCGTTTCGAGCT  
CTCGGTGCAGGATCTCAACGACCTGCTCTCGGACGGCAGCGGCTGCTACAGCCTCCCGAGCCAGCCCTGCAACGA  
GGTCACCCCGCGGATCTACGTGGGCAACGCGTCTGTGGCTCAGGACATCCCCAAGCTGCAGAACTAGGCATCAC  
CCATGTGCTGAACGCGGCTGAGGGCAGGTCCCTTCATGCACGTCAACACCAATGCCAACTTCTACAAGGACTCCGG  
CATCACATACCTGGGCATCAAGGCCAACGACACACAGGAGTTCAACCTCAGCGCTTACTTTGAAAGGGCTGCCGA  
CTTCATTGACCAGGCTTTGGCTCAAAAGAATGGCCGGGTGCTCGTCCACTGCCGGGAAGGTTATAGCCGCTCCCC  
AACGCTAGTTATCGCCTACCTCATGATGCGGCAGAAGATGGACGTCAAGTCTGCCCTGAGCATCGTGAGGCAGAA  
CCGTGAGATCGGCCCAACGATGGCTTCCTGGCCCAGCTCTGCCAGCTCAATGACAGACTAGCCAAGGAGGGGAA  
GTTGAAACCC**TAG**GGCACCCCCACCGCCTCTGCTCGAGAGGTCCGTGGGGGAGGCCGTGGGCAAAGGTGTCCCGA  
GCTGCCATGTTTAGGAAACACACTGTACCCTGCTCCCAGCATCACAAGGCACTTGTCTACAAGTGTGTCCCAACA  
CAGTCTTGGGCCACTTTCCCCACCCTGGGGAGCACATAAAGAAGCTTGCCAAGGGGGGCGTCTTGCTCCCCAGT  
TGTCTGTTTCTGTAACTTATGATGTCTTTTCCCTGAGATGGGGGCTCAGAGGGGGAAGGCCTGTGGCCTGCATG  
CTTCCCGATGGCCACGGCAGGAGGTGTGTGGAAGTGAAGGCCTAAGATGCTCACAGAGGTCCCTCATGACCTC  
CCTTCCCCAACTCCCGAATCCTCTCTTGAGTGTGGACCTCAACACCTTGAGCCCTAGTAAAGGAACTATGCAAAT  
GCAGGCCACTCTCCCCACCACGTCTGTGCCCCGCACTGTCCCCACAGCCTTCCACACCCTGTGCATAGGCAGCCC  
TCTCACGTCTTGAGGTCCGAAGCTGGGGTGGGGGTGTCCGTCACTTATTAGTGGATGGAGATTCCACAGCAAGG  
CTGCATTTGAATGATTTCCCTTAGGATGAATGGTCCCTACACAAAGAGGCCTTGTGGGCAAACCTGGAGAACCCTC  
CTAAATCCATAGAGTTTTCAAATGTGAATCTTTGGAAGCCTTGAGTTCAGAATCTGCTGCTCTGGAATATTTCC  
CTTCGATCTTATCTCAGTCACTTCGTTTTTTGAGAAGAGTGATGCCTTGGGTATGCTTTTTTTTTTTCTTTTTTAG  
AAAACAGGGAGTTGAAGTCCAACCTATTTAAAAACCCACCATTTGGAGAATTACAAGGGTTTTGTCTCTGAATTG  
TAGTGTGGCAAGCCCAAGCCACTCGTGCTAACTGCTTTTTGTCTCGGTTGCTATTCCAAGAACAGAAGGAGGAA  
GTTGGCCAATTACAGCGTGTGTGCATGGATGTGTGTGGGGGGCGTGCTCTCAGAAACGCGGCCAGAAGACAAGC  
AGGGAAGTGAAAGTCCAGGCACACACCCTGCCCATTGCAGGTGGCTCTTACAGCTCTCTGGTGCCAGCACGGG  
ATCCCTGAAGTGACTCAGCCAGGCAGACATGAGACATGGCGGAGTGTCCTCAATGGATCCTTTATTGGTGGTAGAG  
CAAAAAAACCCAAACACGATAAACCTTTCAAAGACTTTCTAAGGATGATATTGGAATGCACCAGCCCTCACATG  
TGTATGCACATTTGCCAGAATATAAGAGTTTTGTTTTAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 323**

MSGSFELSVQDLNDLLSDGSGCYSLPSQPCNEVTPRIYVGNASVAQDIPKLQKLGITHVLNAAEGRSFMHVNTNA  
NFYKDSGITYLGIKANDTQEFNLSAYFERAADFIDQALAQKNGRVLVHCREGYRSPTLVIAYLMMRQKMDVKSA  
LSIVRQNREIGFNDGFLAQLCQLNDRLAKEGKLKP

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**FIGURE 324**

GAATTCGGGCGGGCTTCTTCGCTGCCGACGTACGACGAGTGGCCGGGCTCTTGCGTCTGGTAACGCGCTGTCTCT  
AACGCCAGCGCCGTCTCGCGCGCACTGCGCACAGACCACCCGAGACGCCCGGCAGTCCGCAGGCCCCAAACGCGC  
ACGCGACCCCGCTCTCCGCACCGTACCCGGCCGCTCGGCATGGCGCCCCGAGCGCCCGGCGACCCCTGCTGCT  
GCTACTGCCTGTTGCTGCTGCTCGGCCTCATGCATTGTCGTCAGCAGCCATGTTTATGGTGAAAAATGGCAACGG  
GACCGCGTGCATAATGGCCAACCTTCTCTGCTGCCTTCTCAGTGAACCTACGACACCAAGAGTGGCCCCAAGAACAT  
GACCTTTGACCTGCCATCAGATGCCACAGTGGTGCTCAACCGCAGCTCCTGTGGAAAAGAGAACACTTCTGACCC  
CAGTCTCGTGATTGCTTTTGGGAAGAGGACATACTCACTCTCAATTTACGAGAAATGCAACACGTTACAGCGT  
TCAGCTCATGAGTTTGTATACTTGTCTAGACACACACCTTTTCCCCAATGCGAGCTCCAAAGAAATCAAGAC  
TGTGGAATCTATAACTGACATCAGGGCAGATATAGATAAAAAATACAGATGTGTTAGTGGCACCAGGTCCACAT  
GAACAACGTGACCGTAACGCTCCATGATGCCACCATCCAGGCGTACCTTTCCAACAGCAGCTTCAGCAGGGGAGA  
GACACGCTGTGAACAAGACAGGCCTTCCCCAACCACAGCGCCCCCTGCGCCACCCAGCCCCCTCGCCCTCACCCGT  
GCCCCAAGAGCCCCCTCTGTGGACAAGTACAACGTGAGCGGCACCAACGGGACCTGCCTGCTGGCCAGCATGGGGCT  
GCAGCTGAACCTCACCTATGAGAGGAAGGACAACACGACGGTGACAAGGCTTCTCAACATCAACCCCAACAAGAC  
CTCGGCCAGCGGGAGCTGCGGCGCCACCTGGTGACTCTGGAGCTGCACAGCGAGGGCACCACCGTCTCTGCTCTT  
CCAGTTCGGGATGAATGCAAGTTCTAGCCGGTTTTTCTACAAGGAATCCAGTTGAATACAATTCTTCTGACGC  
CAGAGACCTGCTTTTAAAGCTGCCAACGGCTCCCTGCGAGCGCTGCAGGCCACAGTCGGCAATTCTTACAAGTG  
CAACGCGGAGGACAGTCCGTGTACGAAGGCGTTTTCAGTCAATATATTCAAAGTGTGGGTCCAGGCTTTCAA  
GGTGGAAGGTGGCCAGTTTGGCTCTGTGGAGGAGTGTCTGCTGGACGAGAACAGCACGCTGATCCCCATCGCTGT  
GGGTGGTGCCCTGGCGGGGCTGGTCCTCATCGTCCTCATCGCTACCTCGTCGGCAGGAAGAGGAGTCACGCAGG  
CTACCAGACTATCTAGCCTGGTGACGCAGGCACAGCAGCTGCAGGGGCCTCTGTTCTTTCTCTGGGCTTAGGG  
TCCTGTGCAAGGGGAGGCACACTTTCTGCAAACGTTTCTCAAATCTGCTTCATCCAATGTGAAGTTCATCTTGCA  
GCATTTACTATGCACAACAGAGTAACTATCGAAATGACGGTGTTAATTTTGCTAACTGGGTAAATATTTTGCTA  
ACTGGTTAAACATTAATATTTACCAAAGTAGGATTTTGAGGGTGGGGGTGCTCTCTCTGAGGGGGTGGGGGTGCC  
GCTGTCTCTGAGGGGTGGGGGTGCCGCTGTCTGAGGGGTGGGGGTGCCGCTCTCTCTGAGGGGGTGGGGGTGCC  
CTTTCTCTGAGGGGGTGGGGGTGCCGCTCTCTCTGAGGGGGTGGGGGTGCTGCTCTCTCCGAGGGGTGGAATGCC  
GCTGTCTCTGAGGGGTGGGGGTGCCGCTCTAAATTGGCTCCATATCATTGAGTTTAGGGTTCTGGTGTGTTGGTTT  
CTTCATTCTTTACTGCACTCAGATTTAAGCCTTACAAAGGGAAACCTCTGGCCGTCACACGTAGGACGCATGAAG  
GTCACCTCGTGTGAGGCTGACATGCTCACACATTACAACAGTAGAGAGGGAAAATCCTAAGACAGAGGAACTCCAG  
AGATGAGTGTCTGGAGCGGCTCAGTTTCAAGCTTTAAAGGCCAGGACGCGCGACACGTGGCTGGCGGCCTCGTTCC  
AGTGGCGGCACGTCCCTTGGCGTCTCTAATGTCTGCAGCTCAAGGGCTGGCACTTTTTTAAATATAAAAAATGGTGT  
TATTTTTATTTTTTTTTTGTAAAGTGATTTTTTGGTCTTCTGTTGACATTGCGGTGATCCTGTTCTGCGCTGTGTAC  
AATGTGAGATCGGTGCGTTCTCCTGATGTTTTGCCGTGGCTTGGGGATTGTACACGGGACCAGCTCACGTAATGC  
ATTGCTGTAAACATGTAATAAAAAGCCTCTTTCTTTCAAAAAAACCCGAATTC

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**FIGURE 325**

MAPRSARRPELLLLLPVAAARPHALSSAAMFMVKNNGTACIMANFSAAFVNVDTKSGPKNMTFDLPSDATVVLN  
RSSCGKENTSDPSLVIAFGRGHTLTNLNFTRNATRYSVQLMSFVYNLSDTLHFPNASSKEIKTVESITDIRADIDK  
KYRCVSGTQVHMNNVTVTLHDATIQAYLSNSSFSRGETRCEQDRPSPTTAPPAPPSPSPSPVPKSPSVDKYNVSG  
TNGTCLLASMGLQLNLTYERKDNTTVTRLLNINPNKTSASGSCGAHLVTLELHSEGTTVLLFQFGMNASSSRFFL  
QGIQLNTILPDARDPAFKAANGSLRALQATVGNSYKCNAAEEHVRVTKAFSVNIFKVWVQAFKVEGGQFGSVEECL  
LDENSTLIPIAVGGALAGLVLIYLVGRKRSHAGYQTI

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**FIGURE 326A**

AAGCGGCTCGGGCTGCGGCTGGCTCAGAGTGCCGCGGGGGCGTGGGGCGGTGCTGAGGAGCTGAAGCCGTGGCC  
AGCTCGACTCCGGACAGTCCAGCGAGCAGCACGGCGGGAACCGGCAGCCGGAGCAGTCCCGGAGCAGAAGCAGCA  
GCAGCAGCAGCAGCCCTCGCCGTTGCGGGAGCGCAGCCGAGCCGGCCATGGCGTTGTGCGATGCCGCTGAATGGGC  
TGAAGGAGGAGGACAAAGAGCCCCCTCATCGAGCTCTTCGTCAAGGCTGGCAGTGATGGTGAAAGCATAGGAACT  
GCCCCTTTTCCAGAGGCTCTTCATGATTCTTTGGCTCAAAGGAGTTGTATTTAGTGTGACGACTGTTGACCTGA  
AAAGGAAGCCAGCAGACCTGCAGAACTTGGCTCCCGGGACCCACCCACCATTTATAACTTTCAACAGTGAAAGTCA  
AAACGGATGTAAATAAGATTGAGGAATTTCTTGAAGAGGTCTTATGCCCTCCCAAGTACTTAAAGCTTTCACCAA  
AACACCCAGAATCAAATACTGCTGGAATGGACATCTTTGCCAAATTTCTCTGCATATATCAAGAATTCAAGGCCAG  
AGGCTAATGAAGCACTGGAGAGGGGTCTCCTGAAAACCTGCAGAACTGGATGAATATCTGAATTCTCCTCTCC  
CTGATGAAATTGATGAAAATAGTATGGAGGACATAAAGTTTTCTACACGTAAATTTCTGGATGGCAATGAAATGA  
CATTAGCTGATTGCAACCTGCTGCCCCAACTGCATATTGTCAAGGTGGTGGCCAAAAAATATCGCAACTTTGATA  
TTCCAAAAAGAAATGACTGGCATCTGGAGATACCTAACTAATGCATACAGTAGGGACGAGTTACCAATACCTGTC  
CCAGTGATAAGGAGGTTGAAATAGCATATAGTGATGTAGCCAAAAGACTCACCAAGTAAATCGCGTTTGTAAAA  
GAGATGTCTTCATGTCTTCCCCTAAGAATACGCTTTTCCCTAACAGGCTACTCCTTCCCTGTAGAGCAGAAAATTGTA  
TTTTGCACGAACATGCAGTTATTGAAGATTAGGATCAAGGATAGACAAGGTATAGTAGTTATCTTAAAAATATACA  
CTCCTAAGCAGTATTATTTTTAAATCCTTTACCCTGGCTACCTCCCCTACCGGGTTCCCCTCTCTTTAATTGG  
AGACACTCCACCACAACTTTTCACTTTAGAGGTAGCTTGCCATCTCTCAGGAGCCCTCACCATTGTGTCCATT  
ACTGTGTATAGATGGCAGAATTTTGGAGTGCAATGTTTAAATTGTTAAAAATAGTAGCCACGACTTTATCAGGCA  
GCCCCAACTGGTGCATAATGCATGGTACAAGAAATATTTATGTATTTTTTGAATTTTGTAAATTTTAGTAGGA  
GTATATGAAAGGATTGCTACTGTATCAGAAATATTGTTTCAATTTAGTCTATCCTGGATATGTACTAACGAATAT  
TACCACCAGAGAAGAGAGCTTTCTACAAAAGTCACTACAGATTTTGTCTATATTGCTTTGTAGATAGATTTTACT  
TTTGCTTAAAGCATTATCTCTTCATACCAATTGTAACATCTGACACCATGTAGAAGCTAAAAGTTTAGAGGGAG  
TGAGCGTTTTCTCAAGACCTTCTCAAGCATTATCTTTAGAAGAGAACTGATGGGCACCTGATACTCTGTCT  
AAATACGTTTGTATATGTGTTTTGCCCTGTGCCATTCAATTGGAACCTTATTGCATTCTTTATTTTAAAAAGCT  
TGTTTTTACGTAATCATAGAGCTTGCTATTTGTACATCTGTTGAGCAACACTACATAACTGATTTTTAGTTGACT  
TAGCTATAGCAGTACAATGATTAGTAATGTAAAAATTAACACAGAAATTAACCTAAGGAATGAAGGGTGGGTTTG  
TCAAAATATCAAGTAAATTTTTGTTTCTAAAGTACATTTAATGTAGATGACCTAAAGAATGCGTTATCCATCCTA  
TATAAAAGAAAGATAAAAACACAGGTACCAATTTTCTCATTTCACCCCATTTACCTTGTATAGAGGATTGTTTAT  
TCCTTTGGGACTAAGTTATAGTTATGGTGAGTGTGATTTACTGTAGTTTTGCCTGATCTCACTCATTGCACTTC  
CTGGAGTTAAATTTTCCAACAGCCATGTTGAGGAATAGCACTCTGCATGTTTTTGTGTTTTGTTTTCGGGGTTTTT  
TTTAATTGAAGCCCTAAACCAGGAATTATTTGTGTTCTAACAGGAGGATGAACCTTGCTGAAAATAAAACTTTGCT  
ATGTATTTACTCTTTTTTAAAAGACAAAAGCAAAACCAGACTTTCTACGTACTACTCCAAAGACTGTGATTGTGA  
CTATAATACATTTTTTGGTAATTTTTTATACCTAATTTGTATAGGAAGTGCTATTTCTCATAGGCTGTTTCTTGA  
AATTTTAAAGTTTATTGCTTTTAAATGGCAGTGTTTCTCCCACTTTGATATGCTAACATTTAGTAAGCACTGGCTT  
TATGAAAGCGGCTTTTTTATAAGTATACTGCATTTTTTGGAGCTATCATTAATTAGCTTAGTATGAAAGATAAGAA  
AATCTCCATGTTGTATCCATTTGGCTCAGGAAGATTCTTTGCCTTACCTTTCTTAGAACTCTTTATTGCTTATCA  
AAAGTTTGAGTACCCGCTTGGTTTTTTTTTGGTAATTAAATATTGTATGATTTATCTGGTTCAAGGAAGATGCAC  
TATTCAGTTATCTATTGAGAAATTATTTTGCAGTGGTTTTAGTGGGTGAAAATGTCCCATCTGCACCAGTACACA  
GGCAGGCATTATCATTTCTTACCTACTTTTTAAATAGTGGCAACTTGGGATTCCTTCTGGTGATTCTGAACCTTG  
CCTCATAGCTTAAAGTATAAAAAAAGATTCAAGAGCAGTGAGTTTTGTCTTTCCAGTGAATGGTGGACTGAGTG  
GTGCGAGGTGGAGGGCTACAAGAGGAAAGAACTACATTTCTCAGAATACAGTGATGAAAATTCATTTGAAACT  
CAAAATTTTTCATTTTGGATATTCTCCTGTTTTTATTAAACCAGTGATTACACCTGGCCATCCCTCTAAATGTTT  
TAGGAAGGCATGTCTATTGTGATTTTGTGAAAGACAGAATTATTTTTCTCTGTAGAAACACAGATACCACTTTAT  
CAGGGAAGTTAGTCAAATGAAATGGAAATTGGTAAATGGACAAAAGCTAGCTAGTAAAAAGGACGACCCAGCAAC  
ATGCTTTAACCCCATTTGTATGTTTGTGAAAGAGCATAGTTTAAACATCTTGAGAAATTTGGGACATAAAGTTTTT  
ATGGTAGACAGTTCATGCAGTATATGAATTGACATAATGGAAATAATCTGATTTTATTTTTTACAACATAACATCCA  
TTCCCTTTCATTTAAACACCTTTTGTGTTTTTACTTCAGTGAGGAGATTGGAGTCTGAATGGATCTGTTTTCCAAG  
AGATTCTGAGAAATTTTTGTATTTCAGCAGTTGGAAAGCTCTCTATTCTAGTTGATAAACTTCCCTTTTTTGATG

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**FIGURE 326B**

TAGATGCAGATATTCTATACAGTTCTGTTGTCTTTTACTAGGACTGTAACTTTTGTGATAAAATTCAAATAAGA  
TTTTATTTCTTTGTAATTTTGGCTTTCACAATTTATCTTTAAATCCTTGAGCAATCTGTATACAATTAAGAGATT  
TCTGACATTTATTCTTACACTAAATGGATCAACTCTAGGATTTAGGCATGTAACTTCTGTTGTGTTTTGAATCT  
CTCCAGAGTTGCATGTAGATAGCATTATTTCTGTGCCCTTAAACCCATTTAGAAAATAACTACAAAGTAAAAAT  
GTAGAGGAAATAGAAATGTATTTTTTCATGAACATTTTGATACAAATTCATCATTTAATGATTCACCAATTTCT  
TGCATTAATTTGAATTTAAGCATTTAATTCAAAGAGAGGGGAGCATCCATTATTGGTACATGTGGGCTTTTAAAA  
ACTCCATCCTTTATAAATAGTCAAGGTTTGGGCCACACAAAGTATATTTTATCATGGAAAAATTTCAACTCCTC  
AAGCCGTAATGTTGAACAGAATTGGAGTATTTTCTTTATAATTTCTTGAACAGGCAAATGAAAGCTTATTATAGA  
ATGCATGTATTTTCTTTTATCTTTGGAACATCAGCACCAGTATATTGCTGGCAGCTATTGTATTAAAAAATAAAG  
TATATTTTCACTATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 327**

MALSMPLNGLKEEDKEPLIELFVKAGSDGESIGNCPFSQRLFMILWLKGVVFSVTTVDLKRKPADLQNLAPGTHP  
PFITFNSEVKTDV NKIEEFLEEVLCPPKYLKLSPKHPESNTAGMDIFAKFSAYIKNSRPEANEALERGLLKTQK  
LDEYLN SPLPDEIDENS MEDIKFSTRKF LDGNEMTLADCNLLPKLHIVKV VAKKYRNFDIPKEMTGIWRYLTNAY  
SRDEFTNTCPSDKEVEIAYS DVAKRLTK

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**FIGURE 328**

TGCTGCGAACCACGTGGGTCCCGGGCGCGTTTCGGGTGCTGGCGGCTGCAGCCGGAGTTCAAACCTAAGCAGCTG  
GAAGGAACCATGGCCA~~ACT~~GTGAGCGTACCTTCATTGCGATCAAACCAGATGGGGTCCAGCGGGGTCTTGTGGGA  
GAGATTATCAAGCGTTTTGAGCAGAAAGGATTCCGCCTTGTTGGTCTGAAATTCATGCAAGCTTCCGAAGATCTT  
CTCAAGGAACACTACGTTGACCTGAAGGACCGTCCATTCTTTGCCGGCCTGGTGAAATACATGCACTCAGGGCCG  
GTAGTTGCCATGGTCTGGGAGGGGCTGAATGTGGTGAAGACGGGCCGAGTCATGCTCGGGGAGACCAACCCTGCA  
GACTCCAAGCCTGGGACCATCCGTGGAGACTTCTGCATACAAGTTGGCAGGAACATTATACATGGCAGTGATTCT  
GTGGAGAGTGCAGAGAAGGAGATCGGCTTGTTGGTTTCACCCTGAGGAACTGGTAGATTACACGAGCTGTGCTCAG  
AACTGGATCTATGAATTGACAGGAGGGCAGACCACATTGCTTTTCACATCCATTTCCCTCCTTCCCATGGGCAGA  
GGACCAGGCTGTAGGAAATCTAGTTATTTACAGGAACTTCATCATAATTTGGAGGGAAGCTCTTGGAGCTGTGAG  
TTCTCCCTGTACAGTGTTACCATCCCCGACCATCTGATTAAAATGCTTCCTCCCAGC



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**FIGURE 329**

MANCERTFIAIKPDGVQRGLVGEIIKRFEQKGFRLVGLKFMQASEDLLKEHYVDLKDRPFFAGLVKYMHS GPVVA  
MVWEGNLNVVKTGRVMLGETNPADSKPGTIRGDFCIQVGRNIIHGSDSVESAEKEIGLWFHPEELVDYTSQAQNW  
YE

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**FIGURE 330A**

GCGGCGGTGGCGGCGGAGACCCGAACATGGCGACCGCGCGCACCTTCGGGCGGAGCGGGAAGCCGAGCCGGCCA  
AGGAAGCGCGCTCGTGGGCTCGGAGCTTGTGGACACTTATACGGTTTACATCATCCAGGTCAGTATGGCAGCC  
ATGAGTGACAGTAAAGCACCGCTACAGCGACTTCCATGACCTGCATGAAAAGCTCGTTGCAGAGAGAAAGATTG  
ATAAAAACCTGCTTCCGCCCAAAAAGATAATTGGGAAAACTCAAGAAGCTTGGTGGAGAAGAGGGAGAAGGATC  
TGGAGGTCTACCTCCAGAAGCTCCTGGCTGCCTTCCCTGGCGTGACCCCAGAGTACTGGCCCACTTCTTGCATT  
TTCATTCTATGAGATAAATGGCATCACCGCGGCACTGGCTGAAGAGCTCTTTGAGAAAGGAGAACAGCTCCTGG  
GGGCGGCGAGGTCTTTGCCATTGGACCCCTGCAGCTGTATGCCGTACGGAGCAGCTGCAGCAGGGAAAGCCCA  
CGTGCGCCAGTGGGGATGCCAAGACCGACCTCGGGCACATCCTGGACTTCACCTGTCGCCTTAAGTACCTTAAGG  
TTTCTGGCACAGAAGGACCTTTTGGGACCAGCAACATTAGGAGCAGCTCCTGCCGTTTCGACCTATCAATATTCA  
AGTCCCTGCATCAGGTGGAGATAAGTCACTGTGATGCTAAGCACATCAGAGGGCTGGTCGCATCGAAGCCACCT  
TAGCCACGCTGAGTGTCCGCTTCTCAGCAACCTCGATGAAGGAAGTCCTTGTTCCTGAAGCCTCAGAATTTGATG  
AGTGGGAGCCTGAAGGCACAACCCTAGAAGGCCCTGTGACTGCCGTACATCCCCACTTGGCAGGCATTGACCACGC  
TTGACCTGAGCCACAACAGCATCTCCGAGATCGACGAGTCTGTGAACTGATCCCAAAGATTGAGTTCTGGACC  
TGAGTCACAATGGATTGCTGGTTGTGGACAATCTGCAGCACCTGTATAACCTTGTGCATCTGGACCTGTCTTACA  
ACAAGCTCTCCTCCTTGAAGGGCTTACACCAAGCTGGGGAACATCAAGACCTTAAACCTGGCAGGCAACCTCC  
TAGAGAGTCTGAGTGGCCTGCACAAGCTCTACTCACTGGTCAACCTGGATCTCCGGGACAACAGGATCGAACAGA  
TGGAGGAGGTCCGGAGCATAGGCAGCCTCCCGTGTCTGGAGCACGTGTCTCTGCTGAACAACCTCTGAGCATCA  
TCCCCGACTACCGGACCAAGGTGCTGGCTCAGTTCCGAGAGAGGGCCTCAGAGGTCTGTCTGGATGACACAGTGA  
CCACAGAGAAGGAGCTGGACACTGTGGAAGTGTGAAAGCAATTCAGAAAGCCAAGGAGGTCAAGTCCAAACTGA  
GCAACCCAGAGAAGAAGGGTGGTGAAGACTCCCGGCTCTCAGCTGCCCCCTGCATCAGACCCAGCAGCTCCCCCTC  
CCACTGTGGCTCCCGCATCTGCCTCCCTGCCCCAGCCCATCCTCTCTAACCAAGGAATCATGTTTCGTTCAGGAGG  
AGGCCCTGGCCAGCAGCCTCTCGTCCACTGACAGTCTGACTCCCGAGCACCCAGCCATTGCCCAGGGATGTTCTG  
ATTCTTGGAGTCCATCCCTGCGGGACAGGCAGCTTCCGATGATTTAAGGGACGTGCCAGGAGCTGTTGGTGGTG  
CAAGCCCAAGCATGCCGAGCCGGAGGTCCAGGTGGTGCCGGGGTCTGGCCAGATCATCTTCTGCCCCTTACCT  
GCATTGGCTACACGGCCACCAATCAGGACTTCATCCAGCGCCTGAGCACACTGATCCGGCAGGCCATCGAGCGGC  
AGCTGCCTGCCTGGATCGAGGTGCCAACCAGCGGGAGGAGGGCCAGGGTGAACAGGGCGAGGAGGAGGATGAGG  
AGGAGGAAGAAGAGGAGGACGTGGCTGAGAACCCTACTTTGAAATGGGGCCCCCAGACGTGGAGGAGGAGGAGG  
GAGGAGGCCAGGGGGAGGAAGAGGAGGAGGAAGAGGAGGATGAAGAGGCCGAGGAGGAGCGCCTGGCTCTGGAAT  
GGGCCCTGGGCGCGGACGAGGACTTCTGTCTGGAGCACATCCGCATCCTCAAGGTGCTGTGGTGTCTTCTGATCC  
ATGTGCAGGGCAGTATCCGCCAGTTCGCCGCCTGCCTTGTGCTCACCAGCTTCGGCATCGCAGTCTTCGAGATCC  
CGCACCCAGGAGTCTCGGGGCGAGCAGCCAGCACATCCTCTCCTCCCTGCGCTTTGTCTTTTGTCTCCCGCATGGCG  
ACCTCACCCGAGTTTGGCTTCTCATGCCGGAGCTGTGTCTGGTGTCTAAGGTACGGCACAGTGAGAACACGCTCT  
TCATTATCTCGGACGCCGCCAACCTGCACGAGTTCCACGCGGACCTGCGCTCATGCTTTGCACCCCAGCACATGG  
CCATGCTGTGTAGCCCCATCCTCTACGGCAGCCACACCAGCCTGCAGGAGTTCTGCGCCAGCTGCTCACCTTCT  
ACAAGGTGGCTGGCGGCTGCCAGGAGCGCAGCCAGGGCTGCTTCCCCGTCTACCTGGTCTACAGTGACAAGCGCA  
TGGTGCAGACGGCCGCCGGGACTACTCAGGCAACATCGAGTGGGCCAGCTGCACACTCTGTTTCAGCCGTGCGGC  
GCTCCTGCTGCGCGCCCTCTGAGGCCGTCAAGTCCGCCGCCATCCCCCTACTGGCTGTTGCTCACGCCCCAGCACC  
TCAACGTCATCAAGGCCGACTTCAACCCCATGCCCAACCGTGGCACCCACAACCTGTGCAACCGCAACAGCTTCA  
AGCTCAGCCGTGTGCCGCTCTCCACCGTGCTGCTGGACCCACACGCAGCTGTACCCAGCCTCGGGGCGCCTTTG  
CTGATGGCCACGTGCTAGAGCTGCTCGTGGGGTACCGCTTTGTCACTGCCATCTTCGTGCTGCCCCACGAGAAGT  
TCCACTTCTGCGCTCTACAACCAGCTGCGGGCCTCGCTGCAGGACCTGAAGACTGTGGTTCATGCCAAGACCC  
CCGGGACGGGAGGCAGCCCCCAGGGCTCCTTTGCGGATGGCCAGCCTGCCGAGCGCAGGGCCAGCAATGACCAGC  
GTCCCCAGGAGGTCCAGCAGAGGCTCTGGCCCCGGCCCCAGTGGAAGTCCAGCTCCAGCCCCCTGCAGCAGCCT  
CAGCCTCAGGCCCAGCGAAGACTCCGGCCCCAGCAGAGGCCCTCACTTCAGCTTTGGTCCCAGAGGAGACGCCAG  
TGGAAGCTCCAGCCCCACCCCCAGCCGAGGCCCTGCCAGTACCCGAGTGAGCACCTCATCCAGGCCACCTCGG  
AGGAGAATCAGATCCCCCTCGCACTTGCTGCTGCTGCCGTGCTCCGGCACGTGCCAGCCTGCGGGGACGCGCCA  
TCATCGAGCTCTTCCACAGCAGCATTGCTGAGGTTGAAAACGAGGAGCTGAGGCACCTCATGTGGTCTCGGTGG  
TGTTCTACCAGACCCAGGGCTGGAGGTGACTGCCTGCGTGCTGCTCTCCACCAAGGCTGTGTACTTTGTGCTCC

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**FIGURE 330B**

ACGACGGCCTCCGCCGCTACTTCTCAGAGCCACTGCAGGATTTCTGGCATCAGAAAAACACCGACTACAACAACA  
GCCCTTTCCACATCTCCAGTGCTTCGTGCTAAAGCTTAGTGACCTGCAGTCAGTCAATGTGGGGCTTTTCGACC  
AGCATTTCCGGCTGACGGGTTCCACCCGATGCAGGTGGTCACGTGCTTGACGCGGGACAGCTACCTGACGCACT  
GCTTCTCCAGCACCTCATGGTCGTGCTGTCTCTCTGGAACGCACGCCCTCGCCGGAGCCTGTTGACAAGGACT  
TCTACTCCGAGTTTGGGAACAAGACCACAGGGAAGATGGAGAACTACGAGCTGATCCACTCTAGTCGCGTCAAGT  
TTACCTACCCAGTGAGGAGGAGATTGGGGACCTGACGTTCAGTGTGGCCCAAAGATGGCTGAGCCAGAGAAGG  
CCCCAGCCCTCAGCATCCTGCTGTACGTGCAGGCCTTCCAGGTGGGCATGCCACCCCTGGGTGCTGCAGGGGCC  
CCCTGCGCCCCAAGACACTCCTGCTCACCAGCTCCGAGATCTTCCTCCTGGATGAGGACTGTGTCCACTACCCAC  
TGCCCGAGTTTGCCAAAGAGCCGCCGAGAGAGACAGGTACCGGCTGGACGATGGCCGCCGCGTCCGGGACCTGG  
ACCGAGTGCTCATGGGCTACCAGACCTACCCGCAGGCCCTCACCCCTCGTCTTCGATGACGTGCAAGGTCATGACC  
TCATGGGCAGTGTCACCCCTGGACCACCTTTGGGGAGGTGCCAGGTGGCCCGGCTAGAGCCAGCCAGGGCCGTGAAG  
TCCAGTGGCAGGTGTTTTGTCCCCAGTGCTGAGAGCAGAGAGAAGCTCATCTCGCTGTTGGCTCGCCAGTGGGAGG  
CCCTGTGTGGCCGTGAGCTGCCTGTGAGCTCACCGGCTAGCCCCAGGCCACAGCCAGCCTGTCTGTGTCAGCCTG  
ACGCCTACTGGGGCAGGGCAGCAGGCTTTTGTGTTCTCTAAAAATGTTTTATCCTCCCTTTGGTACCTTAATTTG  
ACTGTCTCTCGCAGAGAATGTGAACATGTGTGTGTGTTGTGTTAATTCTTTCTCATGTTGGGAGTGAGAATGCCGG  
GCCCCTCAGGGCTGTGCGGTGTGCTGTGAGCCTCCACAGGTGGTACAGCCGTGCACACCAGTGTCGTGTCTGCTG  
TTGTGGGACCGTTGTTAACACGTGACACTGTGGGTCTGACTTTCTTTCTACACGTCCTTTTCTGAAGTGTGAG  
TCCAGTCCCTTTGTTGCTGTTGCTGTTGCTGTTGCTGTTGCTGTTGGCATCTTGCTGCTAATCCTGAGGCTGGTAG  
CAGAATGCACATTGGAAGCTCCACCCCATATTGTTCTTCAAAGTGGAGGTCTCCCCTGATCCAGACAAGTGGGA  
GAGCCCGTGGGGGCAGGGGACCTGGAGCTGCCAGCACCAAGCGTGATTCTGCTGCCTGTATTCTCTATTCCAAT  
AAAGCAGAGTTTGACACCGTCTTAAAAA

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**FIGURE 331**

MATARTFGPEREAEPAKEARVVGSELVDITYTVYIIQVTDGSHEWTVKHRYSDFHDLHEKLV AERKIDKNLLPPKK  
IIGKNSRSLVEKREKDLEVYLQKLLAAFPVTPRVLAHFLHFHFYEINGITAALAEELFEKGEQLLGAGEVFAIG  
PLQLYAVTEQLQQGKPTCASGDAKTDLGHILDFTCRLKYLKVSGETEGPFGTSNIQEQLLPFDLSIFKSLHQVEIS  
HCDAKHIRGLVASKPTLATLSVRFSATSMKEVLVPEASEFDEWEPEGTTLEGPVTAVIPTWQALTTLDSLHNSIS  
EIDESVKLIPKIEFLDSLHNGLLVVDNLQHLYNLVHLDLSYNKLSSLEGLHTKLGNIKTLNLAGNLLESLSGLHK  
LYSLVNLDLRDNRIEQMEEVRSIGSLPCLEHVSLNNPLSIIPDYRTKVLAQFGERASEVCLDDTVTTEKELDTV  
EVLKAIQKAKEVKSKLSNPEKKGEDSRLSAAPCIRPSSSPPTVAPASASLPQPILSNQGIMFVQEEALASSLS  
TDSLTPHQPIAQGCSDSLESIPAGQAASDDL RDVP GAVGGASPEHAEPVQVVP GSGQII FLFPFTCIGYTATNQ  
DFIQRLSTLIRQAIERQLPAWIEAANQREEGQGEQGEED EEEEEEDVAENRYFEMGPPDVEEEGGGQGEED  
EEEEDEEAEEERLAL EWALGADEDFLEHIRILKVLWCFLIHVQGSIRQFAACLVLTD FGI AVFEIPHQESRGSS  
QHILSSLRFVFCFPHGDLTEFGFLMPELCLVLKVRHSENTLFIISDAANLHEFHADLRSCFAPQHMAMLCSPILY  
GSHTSLQEFRLRQLLTFYKVAGGCQERSQGCFFVYLVYSDKRMVQTAAGDYSGNIEWASCTLC SAVRRSCCAPSEA  
VKSAAIPYWLLLTPQHNLVIKADFNPM PNRGTHNCRNRNSFKLSRVPLSTVLLDPTR SCTQPRGAFADGHVLELL  
VGYRFVTAIFVLPHEKFHFLRVYNQLRASLQDLKTVVI AKTPGTGGSPQGSFADGQPAERRASNDQRPQEVPAEA  
LAPAPVEVPAPAPAAAASASGPAKTPAPAEASTSALVPEETPVEAPAPPPAEAPAQYPSEHLIQATSEENQIPSHL  
PACPSLRHVASLRGSAI IELFHSSIAEVENEEELRHLMWSSVVFYQTPGLEVTACVLLSTKAVYFVLHDGLRRYFS  
EPLQDFWHQKNTDYNNSPFHISQCFVLKLSDLQSVNVGLFDQHFRLTGSTPMQVVTCLTRDSYLTHCF LQHLMVV  
LSSLERTPSPEPVDKDFYSEFGNKTTGKMENYELIHSSRVKFTYPSEEEIGDLTFTVAQKMAEPEKAPALSILLY  
VQAFQVGMPPPGCCRGPLRPKTL LLSSEIFLLDEDCVHYPLPEFAKEPPQRDRYRLDDGRRVRDLDRVLMGYQT  
YPQALTLVFDDVQGHDLMGSVTL DHFGEVPGGPASQGREVQWQVFVPSAESREKLISLLARQWEALCGREL PV  
ELTG

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**FIGURE 332**

AGGCGCTGCGGCCGTCCCGGGCCGTGACTCCTCCTTTCCCCGCCCGCCTCCGTTCCGAGAGCCGGCGGGCGGG  
CGCCTCTCGGCCAGGTACGCGGCCGGCTGGGATAGGGGTCGCGGGCGGGCTTTGGTCGCGCAGCAGCCGGTCCTC  
CCCGGAGGTAGGCGGGCGCGGGCCCTGTTGGGTCTTTGGGACGCGGGTCCCGCTGGGGCCGGGGATGCTCCTCTC  
TGTGAGCGCGGTCCCGTCCCCCCTGTCCCCGGGCGGGCGCACGGGGGTCTAACCTTGGGGGGCGGGCGCTCCCGC  
CTGTCCCGGGTGCCGGGGTTTCGCGTCCCGCGGGGCCTTCCTCGCTCTTTGTCTCTTCTGAGTGAACCTTGATGACC  
CCCTTCTTCCAGGAAGCGCCTCTTGACGCGTGTGACCGATGCCAGATTGCACGACCACTTCTGGAGCTGCTCC  
TGTGCGCACAGCGGAGGCGCCGAGGCCCGCGAGCCAGCACCGCGGGGCTGCCGCCAAAGGTTGGGGAGATG  
ATCAACGTTTCCGTGTCCGGGCCCTCCCTGCTGGCGGCCACGGTGCCCGGACGCTGACCCCGCGCCAGGGGC  
CGCAGTGCTGCGATGAGCGGCCCGAGCCCGGCAGCCCTACCCCAACACCTGGCATCATCGCTGTTGCAGAGG  
AGCCTCGTGCTCTTCTCGGTTGGGGTGGTCTAACCTGGTGCTCAACCTGCTGCAGATCCAGAGGAATGTCAC  
CTCTTCCCCGAGGAGGTGATCGCCACCATCTTTTCTCCGCTGGTGGGTCCCTCCCTGCTGCGGGACAGCAGCT  
GCTGTTGTTGGCCTACTGTACCCCTGTATCGACAGTCACCTCGGAGAACCCACAAATTTAAGAGAGAATGGGCC  
AGTGTGATGCGCTGCATAGCAGGTTTTGGTGGCATTAAACCACGCCAGTGCTAAATTGGATTTTGCCAATAATGTC  
CAGCTGTCCTTGACTTTAGCAGCCCTATCTTTGGGCCCTTGGTGGACATTTGATCGTTCCAGAAGTGGCCTTGGG  
CTGGGGATCACCATAGCTTTTCTAGCTACGCTGATCAGCAGTTTCTCGTGTATAATGGTGTCTATCAGTATACG  
TCCCCAGATTTCTCTATATTCTGTTCTTGGCTCCCTTGATATTTTTCTCAGGAGGCGTCACGGTGGGGAACATA  
GGACGACAGTTAGCTATGGGTGTTCTGAAAAGCCCCATAGTGATGAGTCTTCAAACCACCGATTCTGAGAGC  
AAGGAAGATTTTGGAAGAAAATCTGACTGTGGATTATGACAAAGATTATCTTTTTTCTTAAGTAATCTATTTAGA  
TCGGGCTGACTGTACAAATGACTCCTGGAAAAAAGTCTGACCTATCTAGAAAAGTCAAGAATAGGGAGGTGGAG  
AATGATGACTTACCCTGAAGTCTTCCCTTGCTACCCACACTGGCGCCTGTCTGTGCCCTGGAGCATTCTGCCAG  
CCTACGTGGGTTGAGTCAGGTGCCACCTTCCCAAGTATTCGATTTTATTGATGTGATTAACAAAGTTGCCATAT  
TTCAAAGCCTTGAGCTAAGACTCAATTACCAACCCGAGTTTTGTGTGAGTGCCCAAAGGAGGGAGGTGATGGT  
GCTTAACAAACATGAAGTATGGTGTAAATAGGAATAATTTTATCCAAAAGATTTTAAAAATAGGGCTGTGTTTA  
AAGAAGGAATCAAAACAAGAAAAGCAGCAGTGATTATAGAGAGGTCACACTCTAAGTGGGGTCGCGGCGTGGCCA  
CGCTTCACGGTCACGCTCGTCCGTCTGTCAGTGGCGTGTTCATGGTCACACGTGTGTGTATCACCAGTGGGTC  
AACTGCTTGTGCTATTCCTCCCGCGGCAGTGTTGTGTAGACAATCTTACTGAGCAAAAGGCAATGAAAAGTCTTGGG  
CTCCACACTGCGATATATTGGAATTCCCACCTCAGTTTATGAAGTTTATTTTCAAATCCATAGTCATCTAAGAA  
TGAATACCTGTCTGCCATGTATTTCAATCTTAGTGAGCCAAAATTGTTTGTGTTTACTACAGAATAGAGATGAC  
TGTTTTTTGGCACAGCCCTATGGAATTTGCAATCTGTGATTGCCTTGTAAGGAGAGAGTGATATGGCACTGCA  
TTAAACGTGTGGTGTTTCTAGTCAATGATATTGGTGAGCACAATGTATTCAATTAATGGCATAGACCATAACCAGA  
CCTAATTTGCAAGTATTGGGTCTTCAAACCTTCAAGTGCAATGTATTATGAAAACCAATCTGAGCCTTGTATCTCT  
TAAATATTTATTCCTTCTAACGTGTGAGATGTCCCAGAGAGAAGGGTTCTCCATTCATTTTCTGCTGCTGCTGGAGG  
AAACTCGGCAATGATTTCTTCAAGTTGTGAAGTTCTTTTCGGGTTACAACCTCCACTGGAACCCCTCAACCTTCGAA  
ATACTCCAGTTTGGGGGTTGGGGCCATTTACTTATAAATTTACCGCCGGGTTTTTGAATCTACATGTCTTGGG  
GGCGGGCTCAAATCTTCGAAAGTGTTGGATTAAAA

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**FIGURE 333**

MPRLHDHFWSCSCAHSARRRGPPRASTAGLPPKVGEMINVS SVSGPSLLAAHGAPDADPAPRGRSAAMSGPEPGSP  
YPNTWHRLLQRSVLFSVGVVLTLLVLNLLQIQRNVTLPFEEVIATIFSSAWVPPCCGTAAAVVGLLYPCIDSH  
LGEPHKFKREWASVMRCIAGFGGINHASAKLDFANNVQLSLTLAALSLGLWWTFD RSRSGGLGLGITIAFLATLIT  
QFLVYNGVYQYTSPDFLYIRSWLPCIFFSGGVTVGNIGRQLAMGVPEKPHSD

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**FIGURE 334A**

GGCGAGCCCGGCCGCGAACGTACAGTCCCTGCGCGCTCCCTGCACTCTCCCGAGCTGCGCTAGGCGGGCGCCACG  
GCTGCCCCGGCGAAGGAAACCGAAACCGAGTCCGGGCCCCGTCCCTCCGCGGGCCCCATCCGCCCGGTGCACCCGGGG  
TCGCGCTCGCCAGGCCGCGGAGCCCAGAGCTGCGCGCACGAACCGTGCGCCGGGAGGGCGTGGGCGTGGCGCCGA  
AGGGTCCCGGTCTTCGACGCCTCTGCGGCGGCTCCTCCCTCCTTGCACTTGGATCCCTGGCGGGTGGCGCCCGG  
CCCCGGCCGTGAGCGGCGCACAGAATGGGCGCGATGCTGCTTCTACACGGCGGGGACGTTGTCCCTGCTCCTGCTG  
GTGACCAGCGTCACGCTGCTGGTGGCCCGGTCTTCCAGAAGGCTGTAGACCAGAGTATCGAGAAGAAAATTGTG  
TTAAGGAATGGTACTGAGGCATTTGACTCCTGGGAGAAGCCCCCTCTGCCTGTGTATACTCAGTTCTATTTCTTC  
AATGTCACCAATCCAGAGGAGATCCTCAGAGGGGAGACCCCTCGGGTGAAGAAGTGGGGCCATACACCTACAGG  
GAACTCAGAAACAAAGCAAATATTCAATTTGGAGATAATGGAACAACAATATCTGCTGTTAGCAACAAGGCCTAT  
GTTTTTGAACGAGACCAATCTGTTGGAGACCCTAAAAATTGACTTAATTAGAACATTAAATATTCCTGTATTGACT  
GTCATAGAGTGGTCCCAGGTGCACCTTCTCAGGGAGATCATCGAGGCCATGTTGAAAGCCTATCAGCAGAAGCTC  
TTTGTGACTCACACAGTTGACGAATTGCTCTGGGGCTACAAAGATGAAATCTTGTCCCTTATCCATGTTTTTCAGG  
CCCGATATCTCTCCCTATTTTTGGCCTATTCTATGAGAAAAATGGGACTAATGATGGAGACTATGTTTTTCTAACT  
GGAGAAGACAGTTACCTTAACTTTACAAAAATTGTGGAATGGAATGGGAAAACGTCACCTTGACTGGTGGATAACA  
GACAAGTGCAATATGATTAATGGAACAGATGGAGATTCTTTTCACCCACTAATAACCAAAGATGAGGTCCCTTTAT  
GTCTTCCCCTCTGACTTTTTGCAGGTGAGTGTATATTACTTTTCACTGACTATGAGAGTGTACAGGGACTGCCTGCC  
TTTCGGTATAAAGTTCCCTGCAGAAATATTAGCCAATACGTCAGACAATGCCGGCTTCTGTATACCTGAGGGAAAC  
TGCTTGGGCTCAGGAGTTCTGAATGTCAGCATCTGCAAGAATGGTGCACCCATCATTATGTCTTTCCACACTTT  
TACCAAGCAGATGAGAGGTTTGTCTTCTGCCATAGAAGGCATGCACCCAAATCAGGAAGACCATGAGACATTTGTG  
GACATTAATCCTTTGACTGGAATAATCCTAAAAGCAGCCAAGAGGTTCCAAATCAACATTTATGTCAAAAAATTA  
GATGACTTTGTTGAAACGGGAGACATTAGAACCATGGTTTTCCAGTGATGTACCTCAATGAGAGTGTTCACATT  
GATAAGAGACGGCGAGTCGACTGAAGTCTATGATTAACACTACTTTGATCATCACCAACATACCCTACATCATC  
ATGGCGCTGGGTGTGTTCTTTGGTTTGGTTTTTACCTGGCTTGCATGCAAAGGACAGGGATCCATGGATGAGGGA  
ACAGCGGATGAAAGAGCACCCCTCATTGCAACCTTAAACATTGCCTTTGCTTGGTGAAGAACTGTGTGAGCTGTC  
CTGACCTGGACGATGACGTGGGGAACCCCTCCACCTCCTTGCAAGGCTTGTTCCTGTTGAAAGAAGGAAAAAGAC  
ACGGCGCTGGCAAGTGATAGGAACATTCTGGCCAGAGGTTAAAGAGCAGGCTGACATGGCTGGCCATTAAGCTTT  
ATAAAATCATGTGGGCTCTGAAATTGTTCTTTTATGTGTCTAGCAAGTATTTAATAAACCCCTGTATAGTAATTT  
TGTTGTTGTTGGGTGCTGGTAGCTCCAGAATTTGTGACCACTATTGTGGGTAAAATGTCTCTGCATCACTTGT  
AATGCTACTGGTCTAACTTCATTTCAGTATGCTTCATTACCCGAACCTTGTGCTCAAAATGCGTATATACCATTTT  
ATGTTGTATTCTCCATTTCACTTGCAAAACAGAAAGTAAATAAGAGTTCGGGACCCAGGGTAAAATGGTAGCTTC  
ATCCAATATATCATTCAAATGCATCTGATTTCTAAAACATATTACATTTTATGCTGATCTTCAGTTCATAATTCT  
TCCAGGAAAACCTCAGTCTTCCAACCTGCAATAAAATACTGGGTAGAATCAAATGGGAAAGGGGTGGGTGGGGCAA  
TACCCATGAGTTGATAGTGATAAGCTCCTAAGGATTTTAACTTGTAATTTTGTGAACGAAGAGAATGCATAAAT  
AATGTTGGTGAGGATAAAGTACAGATATTTTCATGTAGAATTAATTGCTAGTTATGATGCTTGTGGATAGTTAACT  
GTTTTTTTTTTAGTCAAAATGATCATGCTACGAAAAGATGCTTCTGAGAGAATGTAATGAGTAACTGATTTTTCT  
TCCTGAGTCGCCCTTGCCAAATATGTTACTGTATTAATTAATCTAATATTGAGTGATTATTTGTAAAAATTATGAA  
TATGGGAAATCCATCTATCTACAGCCTAAGTTACACATAAGTTTCAGAAAGTCTGATTAGACTAAAAGAGATATTT  
CTTCTGGGACAGCCGCTTCTTGGTAATTTTGAAGTCTTTTTTACAAGTCTTCTCCTCAGTTTCAGTTCTTTCCA  
GTGTTTTGTAGCTCACTGTCACTCACTGAATAGAGAAACGTGTGCCCTATACTTCTGTGACAATCATTTTGCTG  
ACAGAATGATGGATGTTTAAATATTGCACAAAGTACTTTAAAGAAAGGTCTGTTAGGACCAGAAGCAGAGACAC  
CACTTTTCAAAGGACTTCTTGGTTTCAGCATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTT  
AGAAATCAAGCATATTTAAGGGCATTTTCTTTGATTCTCAAAGTTCAGCATTCAATTTGAATTGAGAAGCCTATA  
CATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACCTGAACCATTCAAAGGATTTTTTTTTGTTTAAACTG  
GATTTCAATGTAAGCAAATGAAGAAAAAATATAGATTTCAATTTCCATAGCTTCTTATCCCTGTATTGAGGTAAT  
AAATTGTTTTACTGACAATTTTCTTTTCTACACTAAAACAATATGTGATATATTTCCCTCTTGAAGAGGCA  
ATTCAATAACTCTCAAATTTTCTATAGAATCAAGATAGAACCCTTTAGATACTCCAACCTACCAAAAATGTAAAA  
AACTAACAAAAATATTTGGTCTTCAATAATGCTAAATATCTACATTTTTAGAAATTTATCAACATTTAACTAGATA  
ATTGGGCATGTCTTAATTATGCATGTACTTATCCATACTAATAAAATTGACAATGCTAGTGCATACTTATTGGTT

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**FIGURE 334B**

TAGTCCTATTATCAGGATATAATCATCTGTGAGGAGGATATTTTAAATACTGTAAATGATAACAGTTAATGATAT  
ACACATTTAGACTGAGTTGCACACTGGCAGGGAGACCAAAAACATTACTTCCATACTTGTGTCATGATTCTTTT  
TTTTTGAGAGAGTCTCACTCTGTCGCCAGGCTGGAGTACAG



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**FIGURE 335**

MGRCCFYTAGTLSLLLLVTSVTLLVARVFQKAVDQSIKKIVLRNGTEAFDSWEKPPLPVYTQFYFFNVTNP EEI  
LRGETPRVEEVGPYTYRELRNKANIQFGDNGTTISAVSNKAYVFERDQSVGDPKIDLIRTLNIPVLT VIEWSQVH  
FLREIIEAMLKAYQQKLFVTHTVDELLWGYKDEILSLIHVFRPDISP YFGLFYEKNGTNDGDYVFLTGEDSYLNF  
TKIVEWNGKTSLDWWITDKCNMINGTDGDSFHPLITKDEVLYVFP SDFCRSVYITFSDYESVQGLPAFRYKVP AE  
ILANTSDNAGFCIPEGNCLGSGVLNVSICKNGAPIIMSFP HFYQADERFVSAIEGMHPNQEDHETFVDINPLTGI  
ILKAAKRFQINIYVKKLDDFVETGDIRTMVFPV MYL NESVHIDKETASRLKSMINTTLLIITNIPYIIMALGVFFG  
LVFTWLACKGQGSMDGTADERAPLIRT

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**FIGURE 336A**

GC GCGACCGTCCCGGGGGTGGGGCCGGGCGCAGCGGCGAGAGGAGGCGAAGGTGGCTGCGGTAGCAGCAGCGCGG  
CAGCCTCGGACCCAGCCCGGAGCGCAGGGCGGCCGCTGCAGGTCCCCGCTCCCCTCCCCGTGCGTCCGCCCC**ATGG**  
CCGCCGCCGGGCGAGCTGTGCTTGCTCTACCTGTGCGCGGGGCTCCTGTCCCGGCTCGGCGCAGCCTTCAACTTGG  
ACACTCGGGAGGACAACGTGATCCGGAATATGGAGACCCCGGGAGCCTCTTCGGCTTCTCGCTGGCCATGCACT  
GGCAACTGCAGCCCGAGGACAAGCGGCTGTTGCTCGTGGGGGCCCCGCGCGGAGAAGCGCTTCCACTGCAGAGAG  
CCAACAGAACGGGAGGGCTGTACAGCTGCGACATCACCGCCCGGGGGCCATGCACGCGGATCGAGTTTGATAACG  
ATGCTGACCCACGTGAGAAAGCAAGGAAGATCAGTGGATGGGGGTACCCTCCAGAGCCAAGGTCCAGGGGGCA  
AGGTGCTGACATGTGCTCACCGATATGAAAAAGGCAGCATGTTAATACGAAGCAGGAATCCCGAGACATCTTTG  
GGCGGTGTTATGTCTGAGTCAGAATCTCAGGATTGAAGACGATATGGATGGGGGAGATTGGAGCTTTTGTGATG  
GGCGATTGAGAGGCCATGAGAAATTTGGCTCTTGCCAGCAAGGTGTAGCAGCTACTTTTACTAAAGACTTTTCATT  
ACATTGTATTTGGAGCCCCGGGTACTTATAACTGGAAAGGGATTGTTCTGTAGAGCAAAAGAATAACACTTTTTT  
TTGACATGAACATCTTTGAAGATGGGCCTTATGAAGTTGGTGGAGAGACTGAGCATGATGAAAGTCTCGTTCCCTG  
TTCTTGCTAACAGTTACTTAGGTTTTTCTTTGGACTCAGGGAAAGGTATTGTTTCTAAAGATGAGATCACTTTTG  
TATCTGGTGCTCCAGAGCCAATCACAGTGGAGCCGTGGTTTTGTGTAAGAGAGACATGAAGTCTGCACATCTCC  
TCCCTGAGCACATATTCGATGGAGAAGGTCTGGCCTCTTCATTGGCTATGATGTGGCGGTGGTGGACCTCAACA  
AGGATGGGTGGCAAGATATAGTTATTGGAGCCCCACAGTATTTTGATAGAGATGGAGAAGTTGGAGGTGCAGTGT  
ATGTCTACATGAACCAGCAAGGCAGATGGAATAATGTGAAGCCAATTTCGTCTTAATGGAACCAAAGATTCTATGT  
TTGGCATTGCAGTAAAAAATATTGGAGATATTAATCAAGATGGCTACCCAGATATTGCAGTTGGAGCTCCGTATG  
ATGACTTGGGAAAGGTTTTTATCTATCATGGATCTGCAAATGGAATAAATACCAACCAACACAGGTTCTCAAGG  
GTATATCACCTTATTTTGGATATTCAATTGCTGGAAACATGGACCTTGATCGAAATTCCTACCCTGATGTTGCTG  
TTGGTTCCCTCTCAGATTCACTAATTTTCAGATCCCGGCTGTGATTAAATATTAGAAAACCATCACAGTAA  
CTCCTAACAGAATTGACCTCCGCCAGAAAACAGCGTGTGGGGCGCCTAGTGGGATATGCCTCCAGGTTAAATCCT  
GTTTTGAATATACTGCTAACCCCGCTGGTTATAATCCTTCAATATCAATTGTGGGCACACTTGAAGCTGAAAAAG  
AAAGAAGAAAATCTGGGCTATCCTCAAGAGTTCAGTTTCGAAACCAAGTTCTGAGCCCAATATACTCAAGAAC  
TAACTCTGAAGAGGCAGAAACAGAAAGTGTGCATGGAGGAAACCTGTGGCTACAGGATAATATCAGAGATAAAC  
TGCGTCCCATTCCCATAACTGCCTCAGTGGAGATCCAAGAGCCAAGCTCTCGTAGGCGAGTGAATTCACCTCCAG  
AAGTTCTTCCAATTCTGAATTCAGATGAACCCAAGACAGCTCATATTGATGTTCACTTCTTAAAAGAGGGATGTG  
GAGACGACAATGTATGTAACAGCAACCTTAAACTAGAATATAAATTTGCACCCGAGAAGGAAATCAAGACAAAT  
TTTCTTATTTACCAATTCAAAAAGGTGTACCAGAACTAGTTCTAAAAGATCAGAAGGATATTGCTTTAGAAATAA  
CAGTGACAAACAGCCCTTCCAACCCAAGGAATCCCACAAAAGATGGCGATGACGCCCATGAGGCTAAACTGATTG  
CAACGTTTCCAGACACTTTAACCTATTCTGCATATAGAGAACTGAGGGCTTTCCCTGAGAAACAGTTGAGTTGTG  
TTGCCAACCAAGATGGCTCGCAAGCTGACTGTGAGCTCGGAAATCCTTTTAAAAGAAATTCAATGTCACTTTTTT  
ATTTGGTTTTAAGTACAACCTGAAGTCACCTTTGACACCCCATATCTGGATATTAATCTGAAGTTAGAAAACAACA  
GCAATCAAGATAATTTGGCTCCAATTACAGCTAAAGCAAAAGTGGTTATTGAAGTGTCTTTATCGGTCTCGGGAG  
TTGCTAAACCTTCCCAGGTGTATTTTGGAGGTACAGTTGTTGGCGAGCAAGCTATGAAATCTGAAGATGAAGTGG  
GAAGTTTAATAGAGTATGAATTCAGGGTAATAAACTTAGGTAAACCTCTTACAAACCTCGGCACAGCAACCTTGA  
ACATTCAAGTGGCCAAAAGAAATTAGCAATGGGAAATGGTTGCTTTATTTGGTGAAAGTAGAATCCAAAGGATTGG  
AAAAGGTAACCTGTGAGCCACAAAAGGAGATAAACTCCCTGAACCTAACGGAGTCTCACAACCTCAAGAAAGAAAC  
GGGAAATTACTGAAAAACAGATAGATGATAACAGAAAAATTTTCTTTATTTGCTGAAAGAAAATACCAGACTCTTA  
ACTGTAGCGTGAACGTGAACGTGTGTGAACATCAGATGCCGCTGCGGGGGCTGGACAGCAAGGCGTCTCTTATTT  
TGCGCTCGAGGTTATGGAACAGCACATTTCTAGAGGAATATTCCAAACCTGAACCTACTTGGACATTCTCATGCGAG  
CCTTCATTGATGTGACTGCTGCTGCCGAAAATATCAGGCTGCCAAATGCAGGCACTCAGGTTGAGTGACTGTGT  
TTCCCTCAAAGACTGTAGCTCAGTATTCGGGAGTACCTTGGTGGATCATCCTAGTGGCTATTCTCGCTGGGATCT  
TGATGCTTGCTTTATTAGTGTTTATACTATGGAAGTGTGGTTTCTTCAAGAGAAATAAGAAAGATCATTATGATG  
CCACATATCACAAGGCTGAGATCCATGCTCAGCCATCTGATAAAGAGAGGCTTACTTCTGATGCAT**TAGT**ATTGAT  
CTACTTCTGTAATTGTGTGGATTCTTTAAACGCTCTAGGTACGATGACAGTGTTCCTCCGATACCATGCTGTAAAG  
ATCCGGAAAGAAGAGCGAGAGATCAAAGATGAAAAGTATATTGATAACCTTGAAAAAAAACAGTGGATCACAAAG  
TGGAACAGAAATGAAAGCTACTCATAGCGGGGGCTAAAAAAGCTTCACAGTACCCAACTGCTTTTTT

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**FIGURE 336B**

CAACTCAGAAATTCAATTTGGATTAAAGCCTGCTCAATCCCTGAGGACTGATTTAGAGTGACTACACACAGT  
ACGAACCTACAGTTTTAACTGTGGATATTGTTACGTAGCCTAAGGCTCCTGTTTTGCACAGCCAAATTTAAACT  
GTTGGAATGGATTTTTCTTTAACTGCCGTAATTTAACTTTCTGGGTTGCCTTTGTTTTGGCGTGGCTGACTTAC  
ATCATGTGTTGGGGAAGGGCTGCCAGTTGCACTCAGGTGACATCCTCCAGATAGTGTAGCTGAGGAGGCACCT  
ACACTCACCTGCACTAACAGAGTGGCCGTCCTAACCTCGGGCCTGCTGCGCAGACGTCCATCACGTTAGCTGTCC  
CACATCACAAGACTATGCCATTGGGGTAGTTGTGTTTCAACGAAAGTGCTGTCTTAACTAAATGTGCAATAGA  
AGGTGATGTTGCCATCCTACCGTCTTTTCTGTTTCTAGCTGTGTGAATACCTGCTCACGTCAAATGCATACAA  
GTTTCATTCTCCCTTTCACTAAAAACACACAGGTGCAACAGACTTGAATGCTAGTTATACTTATTTGTATATGGT  
ATTTATTTTTCTTTTCTTTACAAACCATTTTGTTATTGACTAACAGGCCAAAGAGTCTCCAGTTTACCCTTCAG  
GTTGGTTTAAATCAATCAGAATTAGAATTAGAGCATGGGAGGGTCATCACTATGACCTAAATTATTTACTGCAAAA  
AGAAAATCTTTATAAATGTACCAGAGAGAGTTGTTTTAATAACTTATCTATAAACTATAACCTCTCCTTCATGAC  
AGCCTCCACCCCACAACCCAAAAGGTTTAAAGAAATAGAATTATAACTGTAAAGATGTTTATTTTCAGGCATTGGAT  
ATTTTTTACTTTAGAGCCTGCATAATGTTTCTGGATTTACATACTGTAACATTTCAGGAATTCTTGGAGAAGATG  
GGTTTATTCACTGAACTCTAGTGC GGTTTACTCACTGCTGCAAACTACTGTATATTCAGGACTTGAAAGAAATGGT  
GAATGCCTATGGAAGTAGTGGATCCAACTGATCCAGTATAAGACTACTGAATCTGCTACCAAACAGTTAATCA  
GTGAGTCGAGTGTTCTATTTTTTGTTTTGTTTCTCCCTATCTGTATTCCCAAAAATTACTTTGGGGCTAATTT  
AACAAGAACTTTAAATTGTGTTTTAATTGTAAAAATGGCAGGGGGTGGAATTATTACTCTATACATTCAACAGAG  
ACTGAATAGATATGAAAGCTGATTTTTTTTAAATTACCATGCTTCACAATGTTAAGTTATATGGGGAGCAACAGCA  
AACAGGTGCTAATTTGTTTTGGATATAGTATAAGCAGTGCTGTGTTTTGAAAGAATAGAACACAGTTTGTAGTG  
CCACTGTTGTTTTGGGGGGGGCTTTTTTCTTTTCCGGAAAAATCCTTAAACCTTAAGATACTAAGGACGTTGTT  
TTGGTTGTAAGTTGGAATCTTAGTCACAAAATATATTTTGTTTACAAAAATTTCTGTAAAACAGGTTATAACAGT  
GTTTAAAGTCTCAGTTTCTTGCTTGGGGAAGTTGTGTCCCTAATGTGTTAGATTGCTAGATTGCTAAGGAGCTGA  
TACTTGACAGTTTTTTAGACCTGTGTTACTAAAAAAAAGATGAATGTCGAAAAGGGTGTTGGGAGGGTGGTCAA  
CAAAGAAACAAAGATGTTATGGTGTTTAGACTTATGGTTGTTAAAAATGTCATCTCAAGTCAAGTCACTGGTCTG  
TTTGCAATTTGATACATTTTTGTACTAAGTATGTTAAATTTTATGATTAGAAATTACCTGTGGATATTT  
GTATAAAAGTGTGAAATAAATTTTTTATAAAAGTGTTCAATTGTTTCGTAAACACAGCATTGTATATGTGAAGCAAA  
CTCTAAAATTATAAATGACAACCTGAATTATCTATTTTCATCAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 337**

MAAAGQLCLLYLSAGLLSRLGAAFNLDTREDNVIRKYGDPGSLFGFSLAMHWQLQPEDKRLLLVGAPRGEALPLQ  
RANRTGGLYSCDITARGPCTRIEFDNDADPTSESKEDQWMGVTVQSQGGKVVTCAHRYEKRQHVNTKQESRDI  
FGRCYVLSQNLRIEDDMDGGDWSFCDGRLRGHEKFGSCQQGVAATFTKDFHYIVFGAPGTYNWKGIVRVEQKNNT  
FFDMNIFEDGPYEVGGETEHDES LVPVPANSYLGFSLD SGKGIVSKDEITFVSGAPRANHSGAVVLLKRDMKSAH  
LLPEHIFDGEGLASSFGYDVAVVDLNKDGWQDIVIGAPQYFDRDGEVGGAVYVVMNQGRWNNVKPIRLNGTKDS  
MFGIAVKNIGDINQDGYPDIAVGAPYDDLKGKVFYHGSANGINTKPTQVLKGISPYFGYSIAGNMDLDRNSYPDV  
AVGSLSDSVTIFRSRPVINIQKTITVTPNRIDL RQKTACGAPSGICLQVKSCFEYTANPAGYNPSISIVGTLEAE  
KERRKSGLSRVQFRNQGSEPKYTQELTLKRQKQKVCMEETLWLQDNIRDKLRPIPI TASVEIQEPSSRRRVNSL  
PEVLPILNSDEPKTAHIDVHFLKEGCGDDNVCNSNLKLEYKFC TREGNQDKFSYLP IQKGVPELV LKDQKDIALE  
ITVTNSPSNPRNPTKDGDDAHEAKLIATFPDTLTYSAYRELRAFPEKQLSCVANQNGSQADCELG NPFKRNSNVT  
FYLV LSTTEVTFDTPYLDINLKLETTSNQDNLAPITAKAKVVI ELLLSVSGVAKPSQVYFGGT VVGEQAMKSEDE  
VGSLIEYEFRVINLGKPLTNLGTATLNIQWPKEISNGKWLLYLVKVESKGLEKVTCEPQKEINSLNLTESHNSRK  
KREITEKQIDDNRFSLFAERKYQTLNCSVNVCVNIRCPLRGLDSKASLILRSRLWNSTFLEEYSKLN YLDILM  
RAFIDVTAAAENIRLPNAGTQVRVTVPFSKTVAQYSGVPWWIILVAILAGILMLALLVFILWKCGFFKR NKDHY  
DATYHKAEIHAQPSDKERLTSDA

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**FIGURE 338**

GGGGGAAGTTGCTGGCTGACTGGGCTTGCGAGGAAACCGCCTCGGAGCTGCAGCGAAGGCCAAGGAATCACTGAA  
GATCGGCGAGGGAGGACAGGGGGTTCATCATGGGTGGCTTTTTCTCAAGTATATTTTCCAGTCTGTTTGGAAGTCT  
GGGAAATGAGAATTTTAATTTTGGGATTAGATGGAGCAGGAAAAACCACAATTTTGTACAGATTACAAGTGGGAG  
AAGTTGTTACTACTATACCTACCATTTGGATTTAATGTAGAGACGGTGACGTACAAAAACCTTAAATTCCAAGTCT  
GGGATTTAGGAGGACAGACAAGTATCAGGCCATACTGGAGATGTTACTATTCAAACACAGATGCAGTCATTTATG  
TAGTAGACAGTTGTGACCGAGACCGAATTGGCATTTCCAAATCAGAGTTAGTTGCCATGTTGGAGGAAGAAGAGC  
TGAGAAAAGCCATTTTAGTGGTGTGTTGCAAATAAACAGGACATGGAACAGGCCATGACTTCCTCAGAGATGGCAA  
ATTCACTTGGGTTACCTGCCTTGAAGGACCGAAAATGGCAGATATTCAAACGTCAGCAACCAAAGGCACCGGCC  
TTGATGAGGCAATGGAATGGTTAGTTGAAACATTAAAAAGCAGACAGTAAATTTCAGTCCATTCTTCTCCCCTGAAA  
TGAAGACTACATCACCTCTCTCCCTTTGGAAACAGTCAAGTGTACTTCACACTACTAGATGTTAAAACCTATATGA  
TTATTGGCATATACTGACTGACTGCAATATTTGTAGTAAATAGGGAAAAATAAGTATTTAGTTGGAGGGATAATTT  
GATCGAATCACCTGAATGTTCTATGTAATGTAAATATTCTTTTCTTGCTTTCTTGTGTTAAGGTATATATTCTA  
TTTGTATGGAATTCTTATTCAAATACAGTTGTATTAAAGAGTATACTCCTATTGGATGAAAAAACCT

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**FIGURE 339**

MGGFFSSIFSSLEGTREMRILILGLDGAGKTTILYRLQVGEVTTIPTIGFNVETVTYKNLKFQVWDLGGQTSIR  
PYWRCYYSNTDAVIYVVDSCDRDRIGISKSELVAMLEEEELRKAILVVFANKQDMEQAMTSSEMANSGLPALKD  
RKWQIFKTSATKGTGLDEAMEWLVETLKSQ

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**FIGURE 340A**

GAATTCGTTGTTGGGAAGGACTGGGGAAACAGCTGTAACATTTGCCACCCTCAGAAGCTGCTGGTCCTGTGTCAC  
ACCACCTTAGCCTCTTGATCGAGGAAGATTCTCGCTGAAGTCTGTTAATTCTACTTTTTGAGTACTTATGAAATAA  
CCACGTGTCTTCAAACCATCTACCATGAAGCTAAAACATACCATCAACCCTATTCTTTTATATTTTATACATTT  
TCTAATATCACTTTTATACTATTTTAAACATACATTCCGTTTTATTTTTTCTCCGAGTCAAGACAAGAAAAATCAAA  
CCGAATTAAAGCAAAGCCTGTAAATTCAAAACCTGATTCTGCATACAGATCTGTTAATAGTTTGGATGGTTTGGC  
TTCAGTATTATAACCTGGATGTGATACTTTAGATAAAGTTTTTACATATGCAAAAAACAAATTTAAGAACAAAAG  
ACTCTTGGGAACACGTGAAGTTTTAAATGAGGAAGATGAAGTACAACCAAATGGAAAAATTTTTAAAAAGGTTAT  
TCTTGGACAGTATAATTGGCTTTCTATGAAGATGTCTTTGTTTCGAGCCTTTAATTTTGGAAATGGATTACAGAT  
GTTGGGTGAGAAACCAAAGACCAACATCGCCATCTTCTGTGAGACCAGGGCCGAGTGGATGATAGCTGCACAGGC  
GTGTTTTATGTATAATTTTTCAGCTTGTACATTATATGCCACTCTAGGAGGTCCAGCCATTGTTTCATGCATTA  
TGAAACAGAGGTGACCAACATCATTACTAGTAAAGAACTCTTACAAACAAAGTTGAAGGATATAGTTTCTTTGGT  
CCCACGCCTGCGGCACATCATCACTGTTGATGGAAAGCCACCGACCTGGTCCGACTTCCCCAAGGGCATCATTGT  
GCATACCATGGCTGCAGTGGAGGCCCTGGGAGCCAAGGCCAGCATGGAAAACCAACCTCATAGCAAACCATTGCC  
CTCAGATATTGCAGTAATCATGTACACAAGTGGATCCACAGGACTTCCAAAGGGAGTCATGATCTCACATAGTAA  
CATTATTGCTGGTATAACTGGGATGGCAGAAAGGATTCCAGAAGTGGAGAGGAAGATGTCTACATTGGATATTT  
GCCTCTGGCCCATGTTCTAGAATTAAGTGCTGAGCTTGTCTGTCTTTCTCACGGATGCCGCATTGGTTACTCTTC  
ACCACAGACTTTAGCAGATCAGTCTTCAAAAAATTAAGGAAGCAAAGGGGATACATCCATGTTGAAACCAAC  
ACTGATGGCAGCAGTTCCGGAATCATGGATCGGATCTACAAAAATGTCATGAATAAAGTCAGTGAAATGAGTAG  
TTTTCAACGTAATCTGTTTATTCTGGCCTATAATTACAAAATGGAACAGATTTCAAAGGACGTAATACTCCACT  
GTGCGACAGCTTTGTTTTCCGGAAGTTTGAAGCTTGTAGGGGGAAATATTCTCTCCTGTTGTGTGGTGGCGC  
TCCACTTTCTGCAACCACGCAGCGATTTCATGAACATCTGTTTCTGCTGTCTGTTGGTCAGGGATACGGGCTCAC  
TGAATCTGCTGGGGCTGGAACAATTTCCGAAGTGTGGGACTACAATACTGGCAGAGTGGGAGCACCATTAGTTTG  
CTGTGAAATCAAATTAAAAACTGGGAGGAAGGTGGATACTTTAATACTGATAAGCCACACCCCAGGGGTGAAAT  
TCTTATTGGGGGCCAAAGTGTGACAATGGGGTACTACAAAATGAAGCAAAAACAAAAGCTGATTTCTCTGAAGA  
TGAAATGGACAAAGGTGGCTCTGTACTGGGGATATTGGAGAGTTTGAACCCGATGGATGCTTAAAGATTATTGA  
TCGTAAAAAGGACCTTGTAAACTACAGGCAGGGGAATATGTTTCTCTTGGGAAAGTAGAGGCAGCTTTGAAGAA  
TCTTCCACTAGTAGATAACATTTGTGCATATGCAACAGTTATCATTCTTATGTCTATTGGATTTGTTGTGCCAAA  
TCAAAAGGAACCTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG  
AATGGAAAATGAGGTACTTAAAGTGCTTTCCGAAGCTGCTATTTTCAGCAAGTCTGGAAAAGTTTGAATTTCCAGT  
AAAAATTCGTTTGAGTCTTGAACCGTGGACCCCTGAACTGGTCTGGTGACAGATGCCTTCAAGCTGAAACGCAA  
AGAGCTTAAACACATTACCAGGCGGACATTGAGCGAATGTATGGAAGAAAATAATTATTCTCTTCTGGCATCAG  
TTTGCTACAGTGAGCTCACATCAAATAGGAAAAATACTTGAAATGCATGTCTCAAGCTGCAAGGCAAACTCCATTC  
CTCATATTAACTATTACTTCTCATGACGTCACCATTTTTAACTGACAGGATTAGTAAAAACATTAAGACAGCAAA  
CTTGCTGTCTGTCTCTTCTTTTCAATTTTCCCCGCCACCAACTTACTTTACCACCTATGACTGTACTTGTGAGTATGA  
GAATTTTTCTGAATCATATTGGGGAAGCAGTGATTTTAAACCTCAAGTTTTTAAACATGATTTATATGTTCTGT  
ATAATGTTTCAAGTTTGTAACTTTTTTAAAGTTTGGATGTATAGAGGGATAAATAGGAAATATAAGAATTGGTTATT  
TGGGGGCTTTTTTACTTACTGTATTTAAAAATACAAGGGTATTGATATGAAATTATGTAAATTTCAAATGCTTAT  
GAATCAAATCATTGTTGAACAAAAGATTTGTTGCTGTGTAATTATTGTCTTGTATGCATTTGAGAGAAATAAATA  
TACCCATACTTATGTTTTAAGAAGTTGAGATCTTGTGAATATATGCCTGTCAGTGTCTTCTTTATATATTTATTT  
TTTATTAGAAAAATGAAGTTTGGTTGGTGATGCATGAAACAAAATAGCAAGAGAGGGTTATAGTTTAAATAGTAA  
GGGAGATAACACAGCATGTGTAGCACCAGTTGATAATTGGTCTCTAGTAGCTTACTGTCAAATGTTCAATGAAG  
TCTTCTGTTTCATCTGTTGAAACTAGGAAAATACCCAACTTAAATGGAAGAATTCTGAAAGAGAGGATAGAATTT  
AAAGAACAAGAGTATATAAAGTTATTCTTTGAATATTTTCGTTGACTATATGTACATTGAGTTATCTATATTTGTA  
AACAAATTAGTCATGGAAAATTATTCTATTCCAAAGTCTCCTTTTAGTCTAGATAATCATTATTTTCAATTTAAAA  
TTAGTGTTTTTTCATAGTTTGCAGTGTGCGTGTATGGATGTGTGTGAGTCAAGTGGTAGCTTATTTAAAAAGCACC  
TTATCCTTTCTCCATAACCTTTGTACACTAAAAAATGAAAGAATTTAGAATGTATTTGATGATAGCATTCTCAC  
TAAGACACATGAGAATTTAACTTTTATAACCGCTGAGTTAAGATTTAATTCATAGGTTTTGATGTCTATTGTTGAA  
GTTATTTGTAATTCAGAAACCTTGCTTGTGTGATACATAGTAAGTCTCTTCATTTATTACTGCTTGCTGTTGTT

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**FIGURE 340B**

ATATCTGGATTATCAAAAGCAATAGTGCACCAATTAAGATGTGCTCAAATCAGGACTTAAATCATAGGCACCACA  
TTTTTCATGTCAGACTAGTTACTTTGTTGATTCTCAGTTACTGTAGGCATCAAAAGGCAAAAATCA



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**FIGURE 341**

MNNHVSSKPSMTMKLKHTINPILLYFIHFLISLYTILTYIPFYFFSESQRQEKSNRIKAKPVNSKPD SAYRSVNSLD  
GLASVLYPGCDTLDKVFTYAKNKFKNKRLGTREVLNNEDEVQPNGKIFKKVILGQYNWLSYEDVFVRAFNFNG  
LQMLGQKPKTNIAIFCETRAEWMIAAQACFMYNFQLVTLYATLGGPAIVHALNETEVTNIITSKELLQTKLKDIV  
SLVPRLRHIITVDGKPPTWSDFPKGIIVHTMAAVEALGAKASMENQPHSKPLPSDIAVIMYTSGSTGLPKGVMIS  
HSNIIAGITGMAERIPELGEEDVYIGYLPLAHVLELSAELVCLSHGCRIGYSSPQTLADQSSKIKKGSKGDT SML  
KPTLMAAVPEIMDRIYKNVMNKVSEMSSFQNLFI LAYNYKMEQISKGRNTPLCDSFVFRKVRSLGGNIRLLLC  
GGAPLSATTQRFMNICFCFVGGYGLTESAGAGTISEVWDYNTGRVGAPLVCCEIKLKNWEEGGYFNTDKPHPR  
GEILIGGQSVTMGYKNEAKTKADFSEDENGQRLCTGDIGEFEPDGCLKIIDRKKDLVKLQAGEYVSLGKVEAA  
LKNLPLVDNICAYANSYHSYVIGFVVPNQKELTELARKKGLKGTWEELCNSEMEVNLKVLSEAAISASLEKFE  
IPVKIRLSPEPWTPETGLVTD AFKLKRKELKTHYQADIERMYGRK

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**FIGURE 342**

AGGGGGCCTTAGCGTGCCGCATCGCCGAGATCCAGCGCCCAGAGAGACACCAGAGAACCCACCATGCCCCCTTTG  
AGCCCCCTGGCTTCTGGCATCCTGTTGTTGCTGTGGCTGATAGCCCCCAGCAGGGCCTGCACCTGTGTCCCACCCC  
ACCCACAGACGGCCTTCTGCAATTCCGACCTCGTCATCAGGGCCAAGTTCGTGGGGACACCAGAAGTCAACCAGA  
CCACCTTATACCAGCGTTATGAGATCAAGATGACCAAGATGTATAAAGGGTTCCAAGCCTTAGGGGATGCCGCTG  
ACATCCGGTTTCGTCTACACCCCCGCCATGGAGAGTGTCTGCGGATACTTCCACAGGTCCCACAACCGCAGCGAGG  
AGTTTCTCATTGCTGGAAAACATGCAGGATGGACTCTTGACATCACTACCTGCAGTTTCGTGGCTCCCTGGAACA  
GCCTGAGCTTAGCTCAGCGCCGGGGCTTCACCAAGACCTACACTGTTGGCTGTGAGGAATGCACAGTGTTTCCCT  
GTTTATCCATCCCCTGCAAACATGCAGAGTGGCACTCATTGCTTGTGGACGGACCAGCTCCTCCAAGGCTCTGAAA  
AGGGCTTCCAGTCCCGTCACCTTGCTGCCTGCCTCGGGAGCCAGGGCTGTGCACCTGGCAGTCCCTGCGGTCCC  
AGATAGCCTGAATCCTGCCCCGAGTGGAACGAAGCCTGCACAGTGTCACCCTGTTCCCACTCCCATCTTTCTT  
CCGGACAATGAAATAAAGAGTTACCACCCAGC

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**FIGURE 343**

MAPFEPLASGILLLLWLIAPSRACTCVPPHPQTAF CNSDLVIRAKFVGTP EVNQTTLYQRYEIKMTKMYKGFQAL  
GDAADIRFVYTPAMESVCGYFHRSHNRSEEF LIAGKLQDGLLHITTC SFVAPWNSLSLAQRRGFTKTYTVGCEEC  
TVFPCL SIPCKLQSGTHCLWTDQLLQSEKGFQSRHLACLPREPGLCTWQSLRSQIA

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**FIGURE 344**

CAACCAGGGAGATTTCTCCATTTTCCCTCTTGTCTACAGTGCGGCTACAAATCTGGGATTTTTTTTATTACTTCTTT  
TTTTTTCGAACCTACACTTGGGCTCCTTTTTTTTGTGCTCGACTTTTCCACCCTTTTCCCTCCCTCCTGTGCTGCT  
GCTTTTTGATCTCTTCGACTAAAATTTTTTATCCGGAGTGTATTTAATCGGTTCTGTTCTGTCTCTCCACCAC  
CCCCACCCCTCCCTCCGGTGTGTGTGCCGCTGCCGCTGTTGCCGCCGCCGCTGCTGCTGCTGCTCGCCCCGTC  
GTTACACCAACCCGAGGCTCTTTGTTTCCCTCTTGATCTGTTGAGTTTCTTTGTTGAAGAAGCCAGC**ATGGGT**  
GCCCAGTTCTCCAAGACCGCAGCGAAGGGAGAAGCCGCCGCCGAGAGGCTGGGGAGGCGGCTGTGGCCTCGTCG  
CCTTCCAAAGCGAACGGACAGGAGAATGGCCACGTGAAGGTAAACGGCGACGCTTCGCCCCGCGGCCGCCGAGTCG  
GGCGCCAAGGAGGAGCTGCAGGCCAACGGCAGCGCCCCGGCCGCCGACAAGGAGGAGCCCCGCGGCCGCCGGGAGC  
GGGGCGGCGTCGCCCTCCTCGGCCGAGAAAGGTGAGCCGGCCGCCGCGCTGCCCCGAGGCCGGGGCCAGCCCCG  
GTAGAGAAGGAGGCCCCCCGCGGAAGGCGAGGCTGCCGAGCCCGGCTCGGCCACGGCCGCGGAGGGAGAGGCCGCG  
TCGGCCGCCCTCCTCGACTTCTTCGCCCAAGGCCGAGGACGGGGCCACGCCCTCGCCCAGCAACGAGACCCCCGAAA  
AAAAAAAAGAAGCGCTTTTCTTCAAGAAGTCTTTCAAGCTGAGCGGCTTCTCCTTCAAGAAGAACAAGAAGGAG  
GCTGGAGAAGGCGGTGAGGCTGAGGCGCCCGCTGCCGAAGGCGGCAAGGACGAGGCCGCCGGGGGCGCAGCTGCG  
GCCGCCGCCGAGGCGGGCGCGGCTCCGGGGAGCAGGCAGCGCGCCGGGCGAGGAGGCGGCAGCGGGCGAGGAG  
GGGGCGGCGGGTGGCGACCCCGCAGGAGGCCAAGCCCCAGGAGGCCGCTGTGCGGCCAGAGAAGCCGCCGCCAGC  
GACGAGACCAAGGCCGCCGAGGAGCCCAGCAAGGTGGAGGAGAAAAAGGCCGAGGAGGCCGGGGCCAGCGCCGCC  
GCCTGCGAGGCCCTCCGCCGCCGGGCCCCGGCGCGCCCCCGAGCAGGAGGAGCCCCCGCGGAGGAGCCCGCG  
GCCGCCCGCAGCCTCGTCAGCCTGCGCAGCCCCCTCACAGGAGGCCAGCCCGAGTGCAGTCCAGAAGCCCCCCA  
GCGGAGGCGGCAGAG**TAA**AAGAGCAAGCTTTTGTGAGATAATCGAAGAATTTTCTCCCCGTTTGTGTTGGA  
GTGGTGCCAGGTACTGTTTTGGAGAAGTGTCTACAACCAGGGATTGATTTTAAAGATGTCTTTTTTTATTTTAC  
TTTTTTTTAAGCACCAAATTTTGTGTTTTTTTTTCTCCCCTCCCCACAGATCCCATCTCAAATCATTCTGTT  
AACCACCATCCAACAGGTCGAGGAGAGCTTAAACACCTTCTTCTCTGCCTTGTCTCTTTTATTTTTTATTT  
TTTCGCATCAGTATTAATGTTTTTGCATCTTTTATTCAAAGTGTAAGTCTTTCTTTGTCAATCTATG  
GACATGCCCATATATGAAGGAGATGGGTGGGTCAAAAAGGGATATCAAATGAAGTGATAGGGGTCACAATGGGGA  
AATTGAAGTGGTGCATAACATTGCCAAAATAGTGTGCCACTAGAAATGGTGTAAGGCTGTCTTTTTTTTTTTTT  
TTAAAGAAAAGTTATTACCATGTATTTTGTGAGGCAGGTTTACAACACTACAAGTCTTGAGTTAAGAAGGAAAGA  
GGAAAAAAGAAAAACACCAATACCCAGATTTAAAAAAGGATCATAGTCTTAGGAGTTCATTTAAACC  
ATAGGAACTTTTCACTTATCTCATGTAGCTGTACCAGTCAGTGATTAAGTAGAACTACAAGTTGTATAGGCTTT  
ATTGTTTATTGCTGGTTTATGACCTTAATAAAGTGTAATTATGTATTACCAGCAGGGTGTTTTTAACTGTGACTA  
TTGTATAAAAACAAATCTTGATATCCAGAAGCATGAAGTTTGCACTTTCCACCCTGCCCATTTTTTGTAAAC  
TGCAGTCATCTTGACCTTTTAAACACAAATTTTAAACTCAACCAAGCTGTGATAAGTGGAATGGTTACTGTTT  
ATACTGTGGTATGTTTTTGATTACAGCAGATAATGCTTTCTTTTCCAGTCGTCTTTGAGAATAAAGGAAAAA  
TCTTCAGATGCAATGGTTTTGTGTAGCATCTTGTCTATCATGTTTGTAAATACTGGAGAAGCTTTGACCAATTT  
GACTTAGAGATGGAATGTAAGTTTGTCTACAAAAATTGCTATTAAACTCCTGCTTAAGGTGTTCTAATTTTCTGT  
GAGCACACTAAAAGCGAAAAATAAATGTGAATAAAATGT

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**FIGURE 345**

MGAQFSKTAAKGEAAAERPGEAAVASSPSKANGQENGHVKVNGDASPAAAESGAKEELQANGSAPAADKEEPAAA  
GSGAASPSSAEKGEPAAAAAPEAGASPVEKEAPAEGEAAEPGSATAAEGEAASAASSTSSPKAEDGATPSPSNET  
PKKKKKRFSFKKSFKLSGFSFKKNKKEAGEGGEAEAPAAEGGKDEAAGGAAAAAAEAGAASGEQAAAPGEEAAAG  
EEGAAGGDPQEAKPQEAAVAPEKPPASDETKAAEFPKVEEKKAEAEAGASAAACEAPSAAGPGAPPEQEAAFAEE  
PAAAAASSACAAPSQEAQPECSPEAPPAAEAAE

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**FIGURE 346**

GTTTGAATGAGACTCGTTCGCACCGAAGCCGCCGCCACCACCGCGCCTCCGCCTCGGCCGCCGCCGCAGCTGCTCC  
TGGTCCCCGTCCCTTTGCCGCCCTCGTCAGGCCAGCTCTCCTGCGCCGCCGCCTCCCGCCGCCGCCCGCCATGC  
CGCTCTACTCCGTTACTGTAAATGGGGAAAGGAGAAATTTGAAGGTGTAGAATTGAATACAGATGAACCTCCAA  
TGGTATTCAAGGCTCAGCTGTTTGCCTTGACTGGAGTCCAGCCTGCCAGACAGAAAGTTATGGTGAAAGGAGGAA  
CGCTAAAGGATGATGATTGGGGAAACATCAAAATAAAAAATGGAATGACTCTACTAATGATGGGGTCAGCAGATG  
CTCTTCCAGAAGAACCCTCAGCCAAAACCTGTCTTCGTAGAAGACATGACAGAAGAACAGTTAGCATCTGCTATGG  
AGTTACCATGTGGATTGACAAACCTTGGTAACACTTGTTACATGAATGCCACAGTTCAGTGTATTTCGTTCTGTGC  
CTGAACTCAAAGATGCCCTTAAAAGGTATGCAGGTGCCTTGAGAGCTTCAGGGGAAATGGCTTCAGCGCAGTATA  
TTACTGCAGCCCTTAGAGATTTGTTTGATTCCATGGATAAACTTCTTCCAGTATTCCACCTATTATTCTACTGC  
AGTTTTTGCACATGGCTTTCCACAGTTTGCCGAGAAAGGTGAACAAGGACAGTATCTTCAACAGGATGCTAATG  
AATGTTGGATACAAATGATGCGAGTATTGCAACAGAAATTGGAAGCAATAGAGGATGATTCTGTTAAAAGAGACAG  
ACTCCTCATCTGCATCGGCAGCGACACCTTCTAAAAAGAAAAGTTAATCGATCAGTTCCTTCGGTGTGAGTTTG  
AAACTACCATGAAATGTACAGAATCTGAAGAAGAAGTCAACAAAGGAAAGGAAAATCAACTTCAGCTTAGCT  
GTTTTATCAATCAGGAAGTCAAGTATCTTTTTACAGGACTTAAATTGCGACTTCAGGAAGAAAATCACCAAACAGT  
CTCCAAAGTTGCAAAGAAATGCCTTGTATATCAAACTCTTCCAAGATCAGCCGGCTGCCTGCTTACTTGACCATT  
AGATGGTTCGATTTTTTTATAAAGAGAAGGAATCTGTGAATGCCAAAGTCTTAAGGATGTTAAATTTCTCTTA  
TGTTGGATATGTATGAACGTGTGTACACCAGAACTTCAAGAGAAAATGGTGTCTTTTCGATCCAAATTCAGGATC  
TAGAAGATAAAAAAGTGAATCAGCAGCCAAATACAAGTGACAAAAAGAGTAGTCCCCAGAAAGAAGTTAAGTATG  
AACCCTTTTCTTTTGCTGATGATATTGGCTCCAATAATTGTGGATACTATGACTTACAAGCAGTACTAACACACC  
AGGGAAGGTCTAGTTCCTCAGGTCATTATGTATCATGGGTGAAAAGGAAACAAGATGAATGGATTAAAGTTTGATG  
ATGACAAAGTCAGCATCGTAACACCAGAAGATATCTTACGGCTTCTTGGTGGTGGAGACTGGCATATCGCTTACG  
TTCTACTCTATGGCCCTCGCAGAGTTGAAATAATGGAAGAGGAAAGTGAACAGTAATCTTCATTTTAGTATTTAT  
GCTTAGATGTGAAAATAAATGTTATTTGTTGATCATTTCTATAATCCAGAGCTTTAGAGGAAGACACATAGGTGG  
GTTTATGTTTCACCTCATTTGGAACAAAAGAGGACAGAAGCAGACCACTCTGTGCACCAACCTAAAAAATTACAG  
AGAAGAGAAAATTATCTTTGGATTGTGCTGCCCTATATAAAGGTGGCAGAAAGACATTTTTTAAAAAGCTTATTAT  
TTCTTGCATTATTTTAAAAAGTTTCAAGATTGAAATGCCTTTCAACCATTTCCTTCTGTGGTCAATTTTCTTGCTG  
CCTTTTTCACCAAGATTTCAGCAGTCAGATGTTTACTGCACACCTATTACCTATTATTTGCTGTTCTTGCATGGT  
TCAAACCACCATTTCTGTAGCCACCCATCCTTTGCCTTATCTAACAAACATTTTCCAGGAAGGTGGAAAAGGAAG  
TGTTGCTCTCATTTGTGTGACTCAGTGCTGCTGTCCATCCCATGGAAACATGGGCACAATCAAGTATTTGTCCAGC  
CTATTGCAGGCTTTTCTGACTTTAAAATAAATTGTGATCAATAATAGTACCTTTGATTATACATTTATTATTGT  
GTCTCTCTCTGATGTACTGTGGATTGTACATTTAACTTTGGAATGGCTTTGTAATAATCAGTCTTAAGAAAATGT  
TGACAAGCTCTGGTTGCTTATTTTTAGAAAATGAGGACATTTAATAATAATAAAAAAAGGGATTAATAGCTTT  
TGACCTCAAGTCTTTTGTCTTCTGAGTGTTGGAGCTTGGCTGAAGACATGTTAATACTGTACAATTTCTGAAGA  
TGTTTATTAACACTGTGCTGTTAAGCATCCATTTAAAAATATTTGTTATCTTCTTTGCCTGCCTGTATTTAAAA  
AGAAATACAAAGTTGTAAAAGTAATGGATTTCTTTGGATGCTGAATGCAGTGATGTTATCAGTCAGATTCTTTCC  
TTGGCTCAGTTGTGTTTGTATTTCTTTCTTAATTTCCCAAACTTTGGCTGGGCACGGTGGCTCACGCCTGTAAT  
CCCAGCACTTTGGGAGGCTGAGGCAGGTGGTTCACTGGAGGTTGAGTTCGAGACCAGCCTGGCCACATGGTGAAA  
CCCTGTCTCTACTAAAGATATAAAAAATTAGCTGGATGTGGTGGTGCACACCTGTGATCCCAGCTACTTTGGGAGGC  
TGAGGTGGGAGAATTGCTTGAACCTGGAAGGCAGAAAGTTGCAGTGAGCTGAGATCACACCACTGCCTCCAGCCT  
GGGTGACAGAGAGACTCTGTCTCAAAAAAAAAAAAAAAAAA

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**FIGURE 347**

MPLYSVTVKWKKEKFEGVELNTDEPPMVFKAQLFALTGVQPARQKVMVKGGLTKDDDWGNIKIKNGMTLLMMGSA  
DALPEEPSAKTVFVEDMTEEQLASAMELPCGLTNLGNTCYMNATVQCIRSVPELKDALKRYAGALRASGEMASAQ  
YITAALRDLFDSDMTSSSIPPIILLQFLHMAFPQFAEKGEQGQYLQDANECWIQMMRVLQQKLEAIEDDSVKE  
TDSSSASAATPSKKKSLIDQFFGVFEFETTMKCTESEEEVTKGKENQLQLSCFINQEVKYLFTGLKLRLQEEITK  
QSPTLQRNALYIKSSKISRLPAYLTIQMVRRFFYKEKESVNAKVLKDVKFPLMLDMYELCTPELQEKMVSFRSKFK  
DLEDKKVNQQPNTSDKKSSPQKEVKYEPFSFADDIGSNNGYYDLQAVLTHQGRSSSSGHYVSWVKRKQDEWIKF  
DDDKVSIVTPEDILRLSGGGDWHIAYVLLYGPRRVEIMEESEQ

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**FIGURE 348**

GAGGAGCTCTGCGCGGCGCGGGCGGGCGATCCGAGCCGGGACGGGCTGCAGGCGGGGGTGCTGCAGAGGACACGAG  
GCGGCGGGGCTGGAGACATGGACC GCGGCGAGCAAGGTCTGCTGAGAACAGACCCAGTCCCTGAGGAAGGAGAAGA  
TGTTGCTGCCACGATCAGTGCCACAGAGACCCTCTCGGAAGAGGAGCAGGAAGAGCTAAGAAGAGAAGCTTGCAAA  
GGTAGAAGAAGAAATCCAGACTCTGTCTCAAGTGTTAGCAGCAAAAGAGAAGCATCTAGCAGAGATCAAGCGGAA  
ACTTGGAATCAATTCTCTACAGGAACTAAAACAGAACATTGCCAAAGGGTGGCAAGACGTGACAGCAACATCTGC  
TTACAAGAAGACATCTGAAACCTTATCCCAGGCTGGACAGAAGGCCTCAGCTGCTTTTTTCGTCTGTTGGCTCAGT  
CATCACCAAAAAGCTGGAAGATGTAAAAAACTCCCCAACTTTTAAATCATTGGAAGAAAAGGTGCAAAAACCTTAAA  
GTCTAAAGTAGGGGGAACCAAGCCTGCTGGTGGTGATTTTGGAGAAGTCTTGAATTCGGCTGCAAAATGCTAGTGC  
CACCACCACGGAGCCTCTTCCAGAAAAGACACAGGAGAGCCTGTGAGATTCTTACCTTTGTTCTGCTACCCACTG  
CCAGATGCTGCAAGCGAGGTCCAAGCACATCTTGTCAACATGCATTGCCATGAATTTCTACCAGATGTGCTTTTA  
TTTAGCTTTACATATTCTTTGACCAAATAGTTTGTGGGTAAACAAAATGAAAATATCTTCACCTCTATTCTTG  
GGAAACACCCCTTTAGTGTACATTTATGTTCCCTTTATTTAGGAAACACCATTATAAAAAACACTTATAGTAAATGGG  
GACATTCACTATAATGATCTAAGAAGCTACAGATTGTCATAGTTGTTTTCTGCTTTACAAAATTGCTCCAGATC  
TGGAATGCCAGTTTGACCTTTGTCTTCTATAATATTTCCCTTTTTTCCCTCTTTGAATCTCTGTATATTTGATT  
CTTAACTAAAATTGTTCTCTTAAATATTCTGAATCCTGGTAATTAAGTTTGGGTGTATTTTCTTTACCTCCAA  
GGAAAGAACTACTAGCTACAAAAATATTTTGAATAAGCATTGTTTTGGTATAAGGTACATATTTTGGTTGAAG  
ACACCAGACTGAAGTAAACAGCTGTGCATCCAATTTATTATAGTTTTGTAAGTAACAATATGTAATCAAACCTTCT  
AGGTGACTTGAGAGTGGAACCTCCTATATCATTATTTAGCACCGTTTGTGACAGTAACCATTTTCAGTGTATTGTT  
TATTATACCCTTATATCAACTTATTTTTCACCAGGTTAAAATTTTAAATTTCTACAAAATAACATTCTGAATCAA  
GCACACTGTATGTTTCAGTAGGTTGAACATATGAACACTGTGCATCAATGTTTCAGTTCAAAGCCTGAAAGTTTAGAT  
CTAGAAGCTGGTAAAAATGACAATATCAATCACATTAGGGGAACCATTTGTTGTCTTCACTTAATCCATTTAGCAC  
TATTTAAAATAAGCACACCAAGTTATATGACTAATATAACTTGAAAATTTTTTATACTGAGGGGTTGGTGATAAC  
TCTTGAGGATGTAATGCATTAATAAAAAATCAACTCATCTTTTCTACTTGTTTTCAATGTGTTGGAACTGTAAA  
ATGATACTGTAGAACCCTGTCTCCTACTTTGAAAACTGAATGTCAGGGCTGAGTGAATCAAAGTGTCTAGACATAT  
TTGCATAGAGGCCAAGGTATTCTATTCTAATAACTGCTTACTCAACACTACCACCTTTTCTTATACTGTATATG  
ATTATGGCCTACAATGTTGTATTTGTTATTTATTAAATTTGTGATTGTTTTATTATTGTTTATGCCAAATGTTAAC  
TGCCAAGCTTGAGTGACCTAAAGCATTTTTTTAAAAGCATGGCTAGATTTACTTCAGTATAAATTATCTTATGAA  
AACCAAATTTTAAAAGCCACAGGTGTTGATTGTTATAAAAATAACATGCTGCCATTCTTGATTGCTAGAGTTTTTG  
TTAGTACTTTGGATGCAATTAAACTATGTGCTATCACATGTGAAAAGCTTAATAAATTCCATCTATCAGTAGTA  
TAGGTCTCAATATTTATTATGAGACCAGTGGTCTGGAAACAGCTTGTTGTACCGAATCAACTGGAGTCTATGCTT  
AAAAAATAAATTTTTTTTTTAACCATCCTTAAATATTGCTTAATGGTATCATATTAACATATTCTAAATAAGGG  
CTTTAAGGCACAGGCTGTTGAAGCATTCTCTCAGAGGAGTGGATCTGTAGAAGTCTGTCTTTCTATAGAAAATATT  
GTGCTTACTCAAGTGTTAAATTATTTTTTCTATGAACTAGTCTACTTCTTAAATTCAAACATATTCTTTTGATC  
ACATTGTTTCTTGAGCATCCTGCCCTGCTACTAACTTTTCAACAAGGCAAAATGGAGTAAAGTGGCAATTTCTTT  
AGATGAGTGAAAATACCCTCAAGTCTCTTTTCTGCCCAAAAAGGGAAGTGATAGAAATGGGGGTGGCAAGTGGG  
GTGAGTGGATGAAGGTGGGTATTGGGGGTGGCTGTGAAAAGAAAATAATGGAGAATCACTTTTCTAGACATCTACC  
TATACTTAATCTAAGAAACAAAGTAATCTACTGTAAAGTACTCTGCCCTTGAAAGAAGTATTAAAAAGAGTGAG  
GATGGATTTAGAAAAAACATGAATTTAGAAATATTCAAAATGGTTTTTGTGGCAGATTCAATATTATGAATTC  
CAGATATTTAAGAATGAGAAACATAGTAATTAGTAGAAATGCCAGAAACAGTTCTGGTTCCCTCTTGTTGTTGA  
CACTAAGAAAAATAGCAAGAGTGTGAAATCTCAGATACTTATGAAATCTCACAGATGTAAGGACTCAAGTGTAGAA  
GAAAATATCCCTTCTTACAAAAGAAATGTCAATTTATGGAGTTTGTGGGAAATAGGGCAAGAATTCTTATGCT  
TATGAGAGCCAAGTAGTCAGTGGAAGAGAGTAGAGCTCAAACTGGATTATCACCTTAGCAACTTAGAATAGTTT  
GAAATAGAAAAAAGTATTTAATTTGGATCTGGATCTGTTAAGATATGCACAGTCTATTTTTTGTATAGTATTGG  
AAAATAAAAAATGCTATAATTTG



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**FIGURE 349**

MDRGEQGLLRTPVPEEGEDVAATISATETLSEEEQEELRRELAKVEEEIQTL SQVLAAKEKHLAEIKRKLGIN S  
LQELKQNIAGWQDVTATSAYKKTSETLSQAGQKASAAFSSVGSVITKKLEDVKNSPTFKSFEEKVENLKSKVGG  
TKPAGGDFGEVLNSAANASATTTEPLPEKTQESL

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**FIGURE 350A**

AGGTAGCAAGATGGCCGCGCTGAGGAAGGCTGTAGTGTGCGGGGCCGAAGCGGACAGGGAATTGGAGGAGCTTCT  
GGAAAGTGCTCTTGATGATTTTCGATAAAGCCAAACCTCCCCAGCACCCCTTCTACCACCACGGCCCCCTGATGC  
TTCGGGGCCCCAGAAGAGATCGCCAGGAGACACTGCCAAAGATGCCCTCTTCGCTTCCCAAGAGAAGTTTTTCCA  
GGAATATTTCGACAGTGAAGTGGCTTCCCAAGCCACTGCGGAGTTTCGAGAAGGCAATGAAGGAGTTGGCTGAGGA  
AGAACCCACCTGGTGGAGCAGTTCCAAAAGCTCTCAGAGGCTGCAGGGAGAGTGGGCAGTGATATGACCTCCCA  
ACAAGAATTCACCTTCTTGCTAAAGGAAACACTAAGTGGATTAGCCAAAAATGCCACTGACCTTCAGAATCCAG  
CATGTCGGAAGAAGAGCTGACCAAGGCCATGGAGGGGCTAGGCATGGACGAAGGGGATGGGAAGGGAACATCCT  
CCCCATCATGCAGAGTATTATGCAGAACCTACTCTCCAAGGATGTGCTGTACCCATCACTGAAGGAGATCACAGA  
AAAGTATCCAGAATGGTTGCAGAGTCATCGGGAATCTCTACCTCCAGAGCAGTTTGAAAAATATCAGGAGCAGCA  
CAGCGTCATGTGCAAAATATGTGAGCAGTTTGAGGCAGAGACCCCCACAGACAGTGAAACCACTCAAAAGGCTCG  
TTTTGAGATGGTGTGCTGGATCTTATGCAGCAGCTACAAGATTTAGGCCATCCTCCAAAAGAGCTGGCTGGAGAGAT  
GCCTCCTGGCTCAACTTTGACCTGGATGCCCTCAATCTTTCGGGCCACCAGGTGCCAGTGGTGAACAGTGTCT  
GATCATGTGAACACACACGTTTTCTCTCTGAGTCCCAGCTATGGGGAACATCTGGAGTCAGCAGAACCATTG  
GGACCTGAGGCAGGAGTGTACCTGCGGGAGAAGTCTGCCCGCTGCCCTCTGTCTATCCATTCAAGATTGTGCCA  
TACCAGCTGAGGTTTTCTCTGTCTCTCTAGGAATAGGGTCTGTTTCACAGGCCATTTCTGTGAACCCCTACTCC  
ATTGTGGTTTTCTGCCACTATCAAAGTTCAGCTACCTGCAAGGTGAAGGAAGGCATCCCTTTTGGGGCATGCACT  
TTCTTTCTTTCTCAAATAATGTTATATGTGCCACACTGATGTTACCTTTACGTCCAGGGTCTTTGTGCCTT  
GTCTCTACTCCCTCTCTTGATCTGGGGAGGAGGGGCAGAGACCTGGGACTCTGTATTTCTATAGTTCTCCTGGC  
AGAGCCTTTGAGAATGGGGAGAAACAGCCTGGGCTGGGGCTACAGGTCTGTCACTATGCTCTCTTGCCCTCAGAC  
AGACCATTTCTGAATTTCTCTAAAGGGAAAGGGCTTTTGCATCTAATCACAATAGAGTTGAAAGAGAGGCCTTAGGA  
TTCTCCTCTCTCTAGGTGCTGAGCCCTCACCTCCCTGTTCCAGGCTGAGAACTCAAATGGTTACCCTGCTTCTTC  
CTACAATGCTGTGTGATATGGGTGAACCCAGCCCTGACCTTCTCTATCCCTGCCCATCCTCCCTTTTACCTC  
CTCTCTTTTTTAAACACCTGTTTATCCCAACCTTTTTGAGCTCAAGCTGTGATAAAGAAGGGCCCATCCTATTTT  
CCCTCATCTAGTCCATTTACGATTCTCACTGACTCCCCGTCTTCTGGCAGACACAAATAAACCCAGTGTCAAGT  
CTAGGAAATTAATGGCTATTCTTCCCCAGATACATTCTGGCTTATTTGAGATACATGATTCTCTTAGAATCCTGT  
CCCTTGGTTCAGGAAAGTAGCTTGGAAAAGGAGTAGGGGTATAGCTTGGGTCCCTTTTCTGCAAGGCCCATGG  
GGCAGAATATAATAAATATTCTGAGTGAGGAGTGTGGTCTTTTTCTGATCTTCTCAGCTTCCGTAAGTTGCAGA  
GTGAGGTATATTAGGAGACTAGTTCTACACAATATTGTAATGCTGGGTCCATCAACACCCACCTTCCACAACCTC  
AGTCTGCACCTCAGTTGGCAAAGGAGACTGGATGGCCATCTTCTCATGTTCCCTTGAGTATTTCAATGTAGAA  
AGCCCTTCAAGTGGTATTATATTTTAACTTTTACATTATTGTTATTAATGTTAGTAATATATTGTTATGTTTTT  
TAAATTATTTTTCTTTAAGCTGACGTGGCTTTTTTCTGTGGCTCCCAGTGGGTCTACGGACCTTGGCTGACATA  
TGTGTTGGTAGTACTCTGGTCAGCTCAGCTGGCTGTCTGGTTCACCTCAGAAGATAAGTCTCTCCAAAGCAAATTC  
ACATGCATTATGAGTCGCTTTGAGCTTCTGACATGTCACTTGCCCCGAGGTTAAACCTTTTACCCCTTGAAGAC  
CTTACATGTTTTATGGTATTGGTGAGGAAGGAAATGTTCTCAAGGTCTCAGGCTATTTGGGAAATTCAACTCCT  
ATACCTTACCAGAGCATGGAAGAGCCCAGATCTGAATGTAAACGTCTCTGTTCTGCCAGAGATGGAAAAAATAC  
AGGTATACTTGTGATATAGTCATGGGGCTTCAGTGTCACTATTTTCTCCTTAAAGCTCCAGCCAAAAACTGGACA  
AGGATAGAGAGGAGGAGGGAAGAACAAAAGAGCCCTTCTCTATGAACCTTGTGCCTTCTGTCTTACCAGTTTTCT  
TTTACAGATTCTCACTTCTGTAGCCTAGCCAGGGCTTACTCCAGGAATCTAAATAGATGCCCTAGTCCACTTTA  
TCTTTGTTCCCAAGGCACCTCATTTTTTATTTTGATTTTGATTGAATGTGAGCAGGTTGACCTCAGGTCACACTTTG  
TTCCAAAAACTTTTGGAAATTATTCCAGGACTTGTGGTGGAGTTATGGTACTCTAGGGCAGTCTTTCTCAAACCTAT  
GTATGGTAAAGGACCAGGTTTTTTGTTTTCCAGTCCTTCACTTATCAATATGCATTCTTATTGCCGATGACAGGT  
ATGGAGTTCACACTGTGTGCTGCCGACCCGGCAAGTTTGACAGCACCCAACTGGCCAGACTGTTCTGTAGGTTA  
AGTCCATTGATCATGTACTTGGATATCACAGCAACATTGAAATGCTAAAAAGTTTTTAAACACTCTCAATTTCTA  
ATTACCATGTACAGACTGGTGAAAAAAGGTGTTCACTGACCAGCACAAGTCTGCAGATCATCTTTG  
AGTAGCACTGTTTTGGGGCCCTCGGTCTCTCTGAAGACCCTAGCAGAACTGATACCTACCTGTATCTCTTGTCT  
CTCCTATTTGAGTTTTCACTTCCAGAGAAGTGTCTTTCAGCAAGAATGTGTCACTAGTAAGGACATCTCTAGCAT  
TTCTCTAGCCTTCTTTTTCTGTCTGCTCAAAAATAATCGTTACAAAGCTTAGGTTTAAAGCTGTATATGAAATATTT  
ATGCGACTCTCAAACCTTTAAAGGAGTTGCTCCTTTGTTCCAAAATTAAATGTGTTAGATAAATTTGTGATTGTAT

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**FIGURE 350B**

GGGTGGCTTCATGAATTAAGAATTGAATTAATACAGACTTTTTGATAATAAAAAAAAAAAAAA

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**FIGURE 351**

MAAAEEGCSVGAEADRELEELLESALDDFDKAKPSPAPPSTTTAPDASGPQKRSPGDTAKDALFASQEKFFQEELF  
DSELASQATAEFKAMKELAESEPHLVEQFQKLSEAAGRVGSDMTSQQEFTSCLKETLSGLAKNATDLQNSSMSE  
EELTKAMEGLGMDEGDGEGNILPIMQSIMQNLLSKDVLVPSLKEITEKYPEWLQSHRESLPPEQFEKYQEHSVM  
CKICEQFEAETPTDSETTQKARFEMVLDLMQQLQDLGHPPKELAGEMPGLNFDLDALNLSGPPGASGEQCLIM

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**FIGURE 352**

CGCAACGCCGGTGCCTGAGGAGCGATGCCGAGGGAAATCATCACCCCTACAGTTGGGCCAGTGCGGCAATCAGATT  
GGGTTCGAGTTCTGGAAACAGCTGTGCGCCGAGCATGGTATCAGCCCCGAGGCGATCGTGGAGGAGTTGCCACC  
GAGGGCACTGACCGCAAGGACGTCTTTTTCTACCAGGCAGACGATGAGCACTACATCCCCGGGCCGTGCTGCTG  
GACTTGGAACCCCGGGTGATCCACTCCATCCTCAACTCCCCCTATGCCAAGCTCTACAACCCAGAGAACATCTAC  
CTGTGCGGAACATGGAGGAGGAGCTGGCAACAACCTGGGCCAGCGGATTCTCCAGGGAGAAAAGATCCATGAGGAC  
ATTTTTGACATCATAGACCGGGAGGCAGATGGTAGTGACAGTCTAGAGGGCTTTGTGCTGTGTCACTCCATTGCT  
GGGGGGACAGGCTCTGGACTGGGTTCCTACCTCTTAGAACGGCTGAATGACAGGTATCCTAAGAAGCTGGTGCAG  
ACATACTCAGTGTTTCCCAACCAGGACGAGATGAGCGATGTGGTGGTCCAGCCTTACAATTCACTCCTCACACTC  
AAGAGGCTGACGCAGAATGCAGACTGTCTGGTGGTGTGGACAACACAGCCCTGAACCGGATTGCCACAGACCGC  
CTGCACATCCAGAACCCATCCTTCTCCAGATCAACCAGCTGGTGTCTACCATCATGTGAGCCAGCACCACCACC  
CTGCGCTACCCCTGGCTACATGAACAATGACCTCATCGGCCTCATCGCCTCGCTCATTCCCACCCACGGCTCCAC  
TTCTCATGACCGGCTACACCCCTCTCACTACGGACCAGTCAGTGGCCAGCGTGAGGAAGACCACGGTCTCTGGAT  
GTCATGAGGCGGCTGCTGCAGCCCAAGAACGTGATGGTGTCCACAGGCCGAGACCGCCAGACCAACCACTGCTAC  
ATCGCCATCCTCAACATCATCCAGGGAGAGGTGGACCCCAACCAGGTCCACAAGAGCTTGAGAGGATCCGGGAA  
CGCAAGTTGGCCAACTTCATCCCGTGGGGCCCCGCCAGCATCCAGGTGGCCCTGTCGAGGAAGTCTCCCTACCTG  
CCCTCGGCCCCACCGGGTCAGCGGGCTCATGATGGCCAACCACACCAGCATCTCCTCGCTCTTCGAGAGAACCTGT  
CGCCAGTATGACAAGCTGCGTAAGCGGGAGGCCTTCCTGGAGCAGTTCCGCAAGGAGGACATGTTCAAGGACAAC  
TTTGATGAGATGGACACATCCAGGGAGATTGTGCAGCAGCTCATCGATGAGTACCATGCGGCCACACGGCCAGAC  
TACATCTCCTGGGGCACCCAGGAGCAGTTGAGTCCCCCAGGACAGGGACCCCTCATCTGCCTTACTGGTTGGCCCA  
AGCCCTGCCTGACTGACCACCCCTCAGAGCACAGATCAGGGACCTCACGCATCTCTTTCTCATATACATGGACT  
CTCTGTTGGCCTGCAAACACATTTACTTCTCCTCTTATGAGACTATTTATCTTTAATAAAGCACTGGG

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**FIGURE 353**

MPREIITLQLGQCGNQIGFEFWKQLCAEHGISPEAIVEEFATEGTDRKDVFFYQADDEHYIPRAVLDDLEPRVIH  
SILNSPYAKLYNPENIYLSEHGGGAGNNWASGFSQGEKIHEDIFDIIDREADGSDSLEGFVLCHSIAGGTGSGLG  
SYLLERLNDRYPPKKLVQTYSVFPNQDEMSDVVVQPYNSSLTLKRLTQNADCLVVLDTALNRIATDRLHIQNPSF  
SQINQLVSTIMSASTTTLRYPGYMNNDLIGLIASLIPTPRLHFLMTGYTPLTTDQSVASVRKTTVLDMRRLQ  
KNVMVSTGRDRQTNHCYIAILNIIQGEVDPTQVHKSQRIRERKLANFIPWGPASIQVALSRKSPYLP SAHRVSG  
LMMANHTSISSLFERTCRQYDKLRKREAFLEQFRKEDMFKDNFDEMDTSREIVQQLIDEYHAATRPDYISWGTQE  
Q

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**FIGURE 354A**

TTTTTAAATTTTGCATTTGACTTAAAGTGCCATGAGAAAAATTTGCATACTGCAAGGTGGTCTAGCCACCTCCTT  
GATTTGGGTACTCTTGGATATGTTCTGCTGCTTTACTTCAGTGAATGCAACAAATGTGATGAAAAAAGGAGAG  
AGGACTTCCTGCTGGAGATGTTCTAGAGCCAGTACAAAAGCCTCATGAAGGTCCTGGAGAAATGGGGAAACCAGT  
CGTCATTCCTAAAGAGGATCAAGAAAAGATGAAAGAGATGTTTAAATCAATCAGTTCAATTTAATGGCAAGTGA  
GATGATTGCACTCAACAGATCTTTACCAGATGTTAGGTTAGAAGGTGTAAAACAAAGGTGTATCCAGATAATCT  
TCCTACAACAAGTGTGGTGATTGTTTTCCACAATGAGGCTTGGAGCACACTTCTGCGAACTGTCCATAGTGTCTAT  
TAATCGCTCACCAAGACACATGATAGAAGAAATGTTCTAGTAGATGATGCCAGTGAAAGAGACTTTTTGAAAAG  
GCCTTTAGAGAGTTATGTGAAAAAACTAAAAGTACCAGTTTCATGTAATTCGAATGGAACAACGTTCTGGATTGAT  
CAGAGCTAGATTAAAAGGAGCTGCTGTGTCTAAAGGCCAAGTGATCACCTTCCTGGATGCCCAATTGTGAGTGTAC  
AGTGGGATGGCTGGAGCCTCTCTTGGCCAGGATCAAAACATGACAGGAGAACAGTGGTGTGTCCCATCATCGATGT  
GATCAGTGATGATACTTTTGGTACATGGCAGGCTCTGATATGACCTATGGTGGGTTCAACTGGAAGCTCAATTT  
TCGCTGGTATCCTGTTCCCAAAGAGAAATGGACAGAAGGAAAGGTGATCGGACTCTTCCTGTGAGGACACCTAC  
CATGGCAGGAGGCCTTTTTTCAATAGACAGAGATTACTTTCAGGAAATTGGAACATATGATGCTGGAATGGATAT  
TTGGGGAGGAGAAAACCTAGAAATTTCTTTAGGATTTGGCAGTGTGGAGGAACCTTTGGAATTTGTTACATGCTC  
ACATGTTGGACATGTGTTTTCGGAAAGCTACACCTTACACGTTTCCAGGAGGCACAGGGCAGATTATCAATAAAAA  
TAACAGACGACTTGCAGAAGTGTGGATGGATGAATTCAGAATTTCTTCTATATAATTTCTCCAGGTGTTACAAA  
GGTAGATTATGGAGATATATCGTCAAGAGTTGGTCTAAGACACAACTACAATGCAACCTTTTTCTGGTACCT  
AGAGAATATATATCCTGATTCTCAAATTCACGTCACATTTCTCATTGGGAGAGATACGAAATGTGGAACGAA  
TCAGTGTCTAGATAACATGGCTAGAAAAGAGAATGAAAAAGTTGGAATTTTAAATTGCCATGGTATGGGGGGTAA  
TCAGGTTTTCTTTATACTGCCAACAAAGAAATTAGAACAGATGACCTTTGCTTGGATGTTTTCCAACTTAATGG  
CCCAGTTACAATGCTCAAATGCCACCACCTAAAAGGCAACCAACTCTGGGAGTATGACCCAGTGAAATTAACCT  
GCAGCATGTGAACAGTAATCAGTGCCTGGATAAAGCCACAGAAGAGGATAGCCAGGTGCCCAGCATTAGAGACTG  
CAATGGAAGTCGGTCCCAGCAGTGGCTTCTTCGAAACGTCACCCTGCCAGAAATATTCTGAGACCAAATTTACAA  
AAAAACGAAAAAATAAGGATTGACTGGGCTACCTCAGCATACATTTCTGCCACATTCTTAAGTAGCAAAAAAGG  
AAAAGTGCTTTCTCTCTGTCAGGATGTAAGGTTTATCAGCCATTAAACTTAGACTTCTCTAGCTTTTCACTAG  
CTGTGAACCAGCCTTCTGTCCATGGACGTGAACTGCATAGTAATGAGACTGTGCACACTGATGTTTACAAGAT  
TGAAAGAGTCTTTCTCCGAAAATCATGGTAAAGAATACTGAGACAATGAAAAAAATCAACAAAATATGCTTTCT  
GGAGAACTGTACCTTCTATGGTTTGCTTGACATCAGTAGTTTCTGCTGAACGTGCTGTGATAATGAAGAGATTT  
CCAAGATTTTTTTTCTGATTAGAACGGGTAGCCAGTATATTAAATATTGATAGAAAAATAAAGAACTGGAACC  
AGATTCAAGATCTTGAAAACAACATTTTTTACAACAAAACAAAAAACTATATTAAACAGGGTTTTAAAGGAAAAAT  
AAAACAGAACTATGAAGAAGTACAATTTGTTATAGTATAGTATCAAATTTCTATATAGATTTTATACCTCAGTGG  
GGAAAAATAACTGATTCCAATGACATTCATTTTGTGTTTCATCTGTGATAGTCATGGATGCTTTTTATTTTCTTGG  
GGTGCTGAAATTGAGCTGAAAAAAAAGGCTCTTTGAATATAGTTTTAATTTCTCTCTACAGTTTTTTTTGTGTTG  
GTTTGTGGGCTGTTGGAATTGTAATTTTTAATTGCCTTCTAAAAAATGGAAATTTAACAATGTCTGATCTCAGCT  
GAACAAATTAGATGTTTCAGTTGCTCTTGGGTCAACTGGCTTACAGATTTACATGTGCACACACACACAAATTTCT  
TTATCACATTTTCGACTTCTTCACCTGACCTAACTGATTATGCGAAATACCCAAGATTTCATGCTACTGTTCACAC  
TTTGTTTTACAGCAATAAATCTTCAGTTCTGTTGTTTATGATTCCACTTAACAAGGGGCCTGCAAATGTGATTT  
ATTATTTGGGTATTTGGAGATAATACATTTGAGGGTTTTTTGGAAAACCTTTTTCACTCCATACTCAAATATGCT  
TCATTGTCAAATGCATATTTAAATTAAATTATTGAATTGTAATGTTTATCTGCTGCTTTTTTTAAATAAAATTTG  
ACTGAAAATGTTTAATTGGCATTTTTTTAATGACTTACCCAAGAAAAGTGCAGCTATTATTCCATATTAATAGGCT  
TGCATTTCTTTCTTAAATCTTATTTAGGCTAAATCAGTTTTATTGTCTCTGATTTTTTTTTTAATACCACAGAAA  
TCACCTGAGTGTCAATTGAAAAGTTGTCAATTAAAAGGTAACCTTTTAACTCTCGTAGGAGGAATCTCATTAAGA  
CATTTTTCTGATATGTAGAGCAGTCTGTTGGCAAAAATGCATATATTTTCTTTCATATTTGTAAAATTATATTT  
AATGGAATTTCTTTCTTTGATTATCAAGGACTTTCACTGCAGGCAGTGTCTATTTCTGTGCCTAAGAATGTTTCC  
AAAAGTCGCATCGCTAATGATATTTGCCAAGTTGAGTGTACACAAAGTTTCTCATATCCTGTTCAAGTTAATCAA  
CATCAAACACATGGGGATGCTTTAGGGTGAGTCTATAATACAAAATGCATAAACCATGTCCCAGGAAATTTGAA  
AGGAAGCAAGTGCTGAATGGAATTTTTTCTTTTCCATGAGCTGTGTTAATTCTATCTCCAGTAGGCCTAATGC  
TTGAAATAAGCAAGATGTCTAATCAATAAATTATTTTTCATGCTCAGAATTTTCAGGTTTTTGTACTCCAGCATAGC

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**FIGURE 354B**

TTGGTCTTATTTCTTACTGTATGAAAGCTTAACAGCAATGTGATTTAAGGTTTTGTTTTAAATGGGAGATGTAAG  
TGATTTAATTCATGGGTACTTTTAGAACCTGATAGATAATCCCATTCCTTTATTTTCTAATTAAAGAATCCTA  
AATACTTTGAAAATACAAAATATTCCTG



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**FIGURE 355**

MRKFAYCKVVLATSLIWVLLDMFLLLYFSECNKDEKKERGLPAGDVLEPVQKPHEGPGEMGKPVVIPKEDQEKM  
KEMFKINQFNLMASEMIALNRSLPDVRLEGCKTKVYPDNLPTTSVVIVFHNEAWSTLLRTVHSVINRSPRHMIEE  
IVLVDDASERDFLKRPLESYVKKLKVPVHVIRMEQRSGLIRARLKGAAVSKGQVITFLDAHCECTVGWLEPLLAR  
IKHDRRTVVCPIIDVISDDTFEYMAGSDMTYGGFNWKLNFRWYPVPQREMDRRKGDRTLFPVRTPTMAGGLFSIDR  
DYFQEIGTYDAGMDIWGGENLEISFRIWQCGGTLEIVTCSHVGHVFRKATPYTFPGGTGQIINKNNRRLAEVWMD  
EFKNFFYIISPGLTKVDYGDISSRVGLRHKLOCKPFSWYLENIYPDSQIPRHYFSLGEIRNVETNQCLDNMARKE  
NEKVGIFNCHGMGGNQVFSYTANKEIRTDDLCLDVSKLNGPVTMLKCHHLKGNQLWEYDPVKLTQLQHVNSNQCLD  
KATEEDSQVPSIRDCNGSRSQQWLLRNVTLP EIF

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**FIGURE 356**

CCGGCCGGCCGAAGAGTTCACAAGTGTGAAGCCTGAAGCCGCCGGGTGCCGCTGTGTAGAAAGAAGCTAAAGCAC  
TTCCAGAGCCTGCTGAGCTCAGAGGTTTCGGAAGACTTATCGACCATGGAGCGCGCTCCTGCTTGTTGCTGCTGC  
TGCTGCCGCTGGTGCACGTCTCTGCGACCACGCCAGAACCTTGTGAGCTGGACGATGAAGATTTCCGCTGCGTCT  
GCAACTTCTCCGAACCTCAGCCCAGCTGGTCCGAAGCCTTCCAGTGTGTGTCTGCAGTAGAGGTGGAGATCCATG  
CCGGCGGTCTCAACCTAGAGCCGTTTCTAAAGCGCGTCGATGCGGACGCCGACCCGCGGCAGTATGCTGACACGG  
TCAAGGCTCTCCGCGTGC GGCGGCTCACAGTGGGAGCCGCACAGGTTCCCTGCTCAGCTACTGGTAGGCGCCCTGC  
GTGTGCTAGCGTACTCCCGCTCAAGGAACTGACGCTCGAGGACCTAAAGATAACCGGCACCATGCCTCCGCTGC  
CTCTGGAAGCCACAGGACTTGCACTTTCCAGCTTGCGCCTACGCAACGTGTCGTGGGCGACAGGGCGTTCTTGGC  
TCGCCGAGCTGCAGCAGTGGCTCAAGCCAGGCCTCAAGGTACTGAGCATTGCCCAAGCACACTCGCCTGCCTTTT  
CCTGCGAACAGGTTTCGCGCCTTCCCGGCCCTTACCAGCCTAGACCTGTCTGACAATCCTGGACTGGGCGAACGCG  
GACTGATGGCGGCTCTCTGTCCCCACAAGTTCCCGGCCATCCAGAATCTAGCGCTGCGCAACACAGGAATGGAGA  
CGCCACAGGCGTGTGCGCCGCACTGGCGGCGGCAGGTGTGCAGCCCCACAGCCTAGACCTCAGCCACAACCTCGC  
TGCGCGCCACCGTAAACCCTAGCGCTCCGAGATGCATGTGGTCCAGCGCCCTGAACTCCCTCAATCTGTCGTTTCG  
CTGGGCTGGAACAGGTGCCTAAAGGACTGCCAGCCAAGCTCAGAGTGCTCGATCTCAGCTGCAACAGACTGAACA  
GGGCGCCGCAGCCTGACGAGCTGCCCGAGGTGGATAACCTGACACTGGACGGGAATCCCTTCCTGGTCCCTGGAA  
CTGCCCTCCCCACGAGGGCTCAATGAACTCCGGCGTGGTCCCAGCCTGTGCACGTTTCGACCCTGTGGTGGGGG  
TGTGCGGAACCCTGGTGTCTGCTCCAAGGGGCCCCGGGGCTTTGCCTAAGATCCAAGACAGAATAATGAATGGACTC  
AAACTGCCTTGGCTTCAGGGGAGTCCCGTCAGGACGTTGAGGACTTTTCGACCAATTCAACCCTTTGCCCCACCT  
TTATTAAATCTTAAAC

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**FIGURE 357**

MERASCLLLLLLLPLVHVSATTPEPCELDDDEDFRCVCNFSEPQPDWSEAFQCVSAVEVEIHAGGLNLEPFLKRVDA  
DADPRQYADTVKALRVRRLLTVGAAQVPAQLLVGALRVLAYSRKELTLEDLKITGTMPFLPLEATGLALSSLRLR  
NVSWATGRSWLAELQQWLKPKLVLSIAQAHSPAFSCEQVRAFPALTSLDLSDNPGLGGERGLMAALCPHKFPAIQ  
NLALRNTGMETPTGVCAALAAAGVQPHSLDLSHNSLRATVNPSPAPRCMWSSALNSLNLSFAGLEQVPKGLPAKLR  
VLDLSCNRLNRAPQPDELPEVDNLTLDGNPFLVPGTALPHEGSMNSGVVPACARSTLSVGVSGLVLLQGARGFA

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**FIGURE 358**

CCGCCGGCCGGGGCGCCTGGCTGCACTCAGCGCCGGAGCCGGGAGCTAGCGGCCGCCGCC**ATG**TCCCACCAGACC  
GGCATCCAAGCAAGTGAAGATGTTAAAGAGATCTTTGCCAGAGCCAGAAATGGAAAGTACAGACTTCTGAAAATA  
TCTATTGAAAATGAGCAACTTGTGATTGGATCATATAGTCAGCCTTCAGATTCCTGGGATAAGGATTATGATTCC  
TTTGTTTTACCCCTGTTGGAGGACAAACAACCATGCTATATATTATTTCAGGTTAGATTCTCAGAATGCCCAGGGA  
TATGAATGGATATTTCATTGCAITGGTCTCCAGATCATTCTCATGTTTCGTCAAAAAATGTTGTATGCAGCAACAAGA  
GCAACTCTGAAGAAGGAATTTGGAGGTGGCCACATTAAAGATGAAGTATTTGGAACAGTAAAGGAAGATGTATCA  
TTACATGGATATAAAAAATACTTGCTGTACAACTCTTCCCTGCCCACTGACTGCAGCTGAGGAAGAACTACGA  
CAGATTAAAAATCAATGAGGTACAGACTGACGTGGGTGTGGACACTAAGCATCAAACACTACAAGGAGTAGCATT  
CCCATTCTCGAGAAGCCTTTCAGGCTTTGGAAAAATTGAATAATAGACAGCTCAACTATGTGCAGTTGGAAATA  
GATATAAAAAATGAAATTATAATTTTGGCCAACACAACAAATACAGAAGTAAAGATTTGCCAAAGAGGATTCCC  
AAGGATTTCAGCTCGTTACCATTCTTTCTGTATAAACATTCCCATGAAGGAGACTATTTAGAGTCCATAGTTTTT  
ATTTATTCAATGCCTGGATACACATGCAGTATAAGAGAGCGGATGCTGTATTCTAGCTGCAAGAGCCGCTGCTA  
GAAATTGTAGAAAGACAACACTACAAATGGATGTAATTAGAAAAGATCGAGATAGACAATGGGGATGAGTTGACTGCA  
GACTTCCTTTATGAAGAAGTACATCCCAAGCAGCATGCACACAAGCAAAGTTTTTGCAAAACCAAAAGGTCCTGCA  
GGAAAAAGAGGAATTCGAAGACTAATTAGGGGCCAGCGGAAACTGAAGCTACTACTGAT**TAA**AGTCATCACATT  
AAACATTGTAATACTAGTTTTTTTAAAGTCCAGCTTTTAGTACAGGAGAAGTGAATCATTCCATGTTGATATAA  
AGTAGGGAAAAAATTGTACTTTTTTGGAAAATAGCACTTTTCACTTCTGTGTGTTTTTAAATTAATGTTATAGA  
AGACTCATGATTTCTATTTTTGAGTTAAAGCTAGAAAAGGGTTCAACATAATGTTTAATTTTGTACACTGTTTT  
CATAGCGTTGATTCCACACTTCAAATACTTCTTAAATTTTATACAGTTGGGCCAGTTCTAGAAAAGTCTGATGTC  
TCAAAGGGTAACTTACTACTTTCTTGTGGGACAGAAAGACCTTAAATATTATATTACTTAATGAATATGTTA  
AGGACCAGGCTAGAGTATTTTCTAAGCTGGAACTTAGTGTGCCTTGGAAAAGCCGCAAGTTGCTTACTCCGAGT  
AGCTGTGCTAGCTCTGTCTCAGACTGTAGGATCATGTCTGCAACTTTTAGAAATAGTGCTTTATATTGCAGCAGTCT  
TTTATATTTGACTTTTTTTTTAATAGCATTAAATTTGCAGATCAGTCACTCTGAAACTTTAAGGGTACCAGATAT  
TTTCTATACTGCAGGATTTCTGATGACATTGAAAGACTTTAAACAGCCTTAGTAAATTATCTTTCTAATGCTCTG  
TGAGGCCAAACATTTATGTTTCAAGATTGAAATTTAAATTAATATCATTCAAAGGAAACAAAAATGTTGAGTTTT  
AAAAATCAGGATTGACTTTTTTCTCCAAAACCATACATTTATGGGCAAATTGTGTTCTTTATCACTTCCGAGCAA  
ATACTCAGATTTAAATTTACTTTAAAGTCTGGTACTTAACAGGCTAACGTAGATAAACACCTTAATAATCTCAG  
TTAATACTGTATTTCAAACACATTTAACTGTTTTCTAATGCTTTGCATTATCAGTTACAACCTAGAGAGATTTT  
GAGCCTCATATTTCTTTGATACTTGAAATAGAGGGAGCTAGAACCTTAATGTTTAAATCTGTTAAACCTGCTGCA  
AGAGCCATAAATTTGAGGCATTTTCTAAATGAAGTGTGGGGATCCAGGATTTGTAATTTCTTGATCTAAACTTTA  
TGCTGCATAAATCACTTATCGGAAATGCACATTTTCATAGTGTGAAGCACTCATTTCTAAACCTTATTATCTAAGG  
TAATATATGCACCTTTTCAAGAAATTTGTGTTTCAGAGTAAGTAAAGCATATTAGAATAATTGTGGGTTGACAGATTTT  
TAAATAGAAATTTAGAGTATTTGGGGTTTTGTTTGTTTACAAATAATCAGACTATAATATTTAAACATGCAAAAT  
AACTGACAATAATGTTGCACCTGTTTACTAAAGATATAAGTTGTTCCATGGGTGTACACGTAGACAGACACACAT  
ACACCCAAATTTATTGCATTAAAGAATCCTGGAGCAGACCATAGCTGAAGCTGTTATTTTCAGTCAGGAAGACTACC  
TGTCATGAAGGTATAAAATAATTTAGAAGTGAATGTTTTTCTGTACCATCTATGTGCAATTATACTCTAAATTC  
ACTACACTACATTAAAGTAAATGGACATTCCAGAATATAGATGTGATTATAGTCTTAAACTAATTATTATTAAC  
CAATGATTGCTGAAAATCAGTGATGCATTTGTTATAGAGTATAACTCATCGTTTACAGTATGTTTTAGTTGGCAG  
TATCATACCTAGATGGTGAATAACATATTTCCAGTAAATTTATATAGCAGTGAAGAATTACATGCCTTCTGGTGG  
ACATTTTATAAGTGCATTTTATATCACAAATAAAAAATTTTTCTCTTTAAAAAACAAGAAAAAAAAAAAAA

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**FIGURE 359**

MSHQTGIQASEDVKEIFARARNGKYRLLKIS IENEQLVIGSYSQPSDSWDKDYDSFVLPLLEDKQPCYILFRLDS  
QNAQGYEWIFIAWSPDHSVRQKMLYAATRATLKKEFGGGHIKDEVFGTVKEDVSLHGYKKYLLSQSSPAPLTAA  
EEELRQIKINEVQTDVGVDTKHQTLOGVAFPI SREAFQALEKLNRLNYVQLEIDIKNEIIILANTTNTTELKDL  
PKRIPKDSARYHFFLYKHSHEGDYLESIVFIYSMPGYTCSIRERMLYSSCKSRLLEIVERQLQMDVIRKIEIDNG  
DELTADFLYEEVHPKQHAHKQSFAPKGPAGKRGIRRLIRGPAETEATTD

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**FIGURE 360**

GTCCGCGTCGCTAGCTAGTCGTTCTGAAGCGGCGGCCAGAGAAGAGTCAAGGGCACGAGCATCGGGTAGCC**ATGC**  
CTTTCTTGGACATCCAGAAAAGGTTCCGGCCTTAACATAGATCGATGGTTGACAATCCAGAGTGGTGAACAGCCCT  
ACAAGATGGCTGGTCGATGCCATGCTTTTGAAAAAGAATGGATAGAATGTGCACATGGAATCGGTTATACTCGGG  
CAGAGAAAGAGTGCAAGATAGAATATGATGATTTTCGTAGAGTGTTTGCTTCGGCAGAAAACGATGAGACGTGCAG  
GTACCATCAGGAAGCAGCGGGATAAGCTGATAAAGGAAGGAAAGTACACCCCTCCACCTCACCACATTGGCAAGG  
GGGAGCCTCGGCCCT**TGA**ACAGAGCAGCTGCTGATGTCTGGAGGCTGATTTTCCTGTTCTCTGTTCTCCACTGGAA  
AGGTTGTTTACGACAAACCTCCTTGTCAAAGTGTGTAAAAATAAAGGATTGCTCCATCCTAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAA

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**FIGURE 361**

MPFLDIQKRFGNIDRWLTIQSGEQPYKMAGRCHAFEKEWIECAHGIGYTRAEKECKIEYDDFVECLLRQKTMRR  
AGTIRKQRDKLIKEGKYTPPPHHIGKGEPRP

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**FIGURE 362**

CGGACGCGTGGGGCCCGGGGGCTGAGGCGCCCGCCGCTGCCGCGGGGGCCGCTCGCGTCTCTCCATGGAGGCCG  
GAGAGGAACCGCTGCTGCTGGCCGAACCTCAAGCCCGGGCGCCCCACCAGTTTGATTGGAAGTCCAGCTGTGAAA  
CCTGGAGCGTCGCCTTCTCCCCAGATGGCTCCTGGTTTGCTTGGTCTCAAGGACACTGCATCGTCAAACTGATCC  
CCTGGCCGTTGGAGGAGCAGTTTCATCCCTAAAGGGTTTGAAGCCAAAAGCCGAAGTAGCAAAAATGAGACGAAAG  
GGCGGGGCAGCCCAAAAGAGAAGACGCTGGACTGTGGTCAGATTGTCTGGGGGCTGGCCTTCAGCCCGTGGCCTT  
CCCCACCCAGCAGGAAGCTCTGGGCACGCCACCACCCCAAGTGCCCGATGTCTCTTGCTGGTTCTTGCTACGG  
GACTCAACGATGGGCAGATCAAGATCTGGGAGGTGCAGACAGGGCTCCTGCTTTTGAATCTTTCGGCCACCAAG  
ATGTCGTGAGAGATCTGAGCTTCACACCCAGTGGCAGTTTGATTTTGGTCTCCGCGTCACGGGATAAGACTCTTC  
GCATCTGGGACCTGAATAAACACGGTAAACAGATTCAAGTGTTATCGGGCCACCTGCAGTGGGTTTACTGCTGTT  
CCATCTCCCCAGACTGCAGCATGCTGTGCTCTGCAGCTGGAGAGAAGTCGGTCTTTCTATGGAGCATGAGGTCCT  
ACACGTTAATTGGAAGCTAGAGGGCCATCAAAGCAGTGTTGTCTCTTGAGACTTCTCCCCGACTCTGCCCTGC  
TTGTCACGGCTTCTTACGATACCAATGTGATTATGTGGGACCCCTACACCGGCGAAAGGCTGAGGTCACTCCACC  
ACACCCAGGTTGACCCCGCCATGGATGACAGTGACGTCCACATTAGCTCACTGAGATCTGTGTGCTTCTCTCCAG  
AAGGCTTGTACCTTGCCACGGTGGCAGATGACAGACTCCTCAGGATCTGGGCCCTGGAAGTGAAGAACTCCCATTTG  
CATTTGCTCCTATGACCAATGGGCTTTTGCTGCACATTTTTTCCACATGGTGGAGTCATTGCCACAGGGACAAGAG  
ATGGCCACGTCCAGTTCTGGACAGCTCCTAGGGTCTGTCTCTACTGAAGCACTTATGCCGGAAGCCCTTCGAA  
GTTTCTAACAACCTTACCAAGTCCTAGCACTGCCAATCCCCAAGAAAATGAAAGAGTTCTCACATACAGGACTT  
TTTAAGCAACACCACATCTTGTGCTTCTTTGTAGCAGGGTAAATCGTCCTGTCAAAGGGAGTTGCTGGAATAATG  
GGCCAAACATCTGGTCTTGCAATTGAAATAGCATTTCCTTGGGATTGTGAATAGAATGTAGCAAAACCAGATTCCA  
GTGTACTAGTCATGGATCTTTCTCTCCCTGGCATGTGAAAGTCAGTCTTAGAGGAAGAGATTCCACTTGCACGGC  
AACAGAGCCTTACGTTAAATTTTCAGTCCAGTTATGAACAGCAAGTGTTGAACCTCTTCTGCTTGTGTTTGATTCA  
AAGTGCAGTTACTGATGTTGTTTTGATTATGCAACTAAGTAGGCCTCCAGAGCCTCTCTAGTGGCAGAGCAGCTC  
ACACTCCCTCCGCTGGGAACGATGGCTTCTGCCTAGTACCTATCCTTGTGTTTCTGATGCAGTGGTAGCATTGGT  
TCAAGTTCTCTCTGCTGTGGTCAGAGTTGCTTCGATGTTGGCCAAGTGCTTTTCTTCTTGGGCTCCCTTCTGAC  
CTGCAGGACAGTTTTCTGGAGCCATTTGGTATGAGGTATTAATTTAGCTTAATAAATTACAGGGGACTCAGAG  
GCCGTGCTCCTGACCGATCCAGACACTATTACTGGCTTTTTTTTTTTTTTAAACAATGGTGTGCATGTGCAGGAAA  
TGACAAATTTGTATGTCAGATTATACAAGGATGTATTCCTAAACCGCATGACTATTAGATGGCTACTGAGTTAT  
CAGTGGCCATTTATTAGCATCATATTTATTTGTATTTCTCAACAGATGTTAAGGTACAACCTGTGTTTTCTCGA  
TTATCTAAAAACCATAGTACTTAAATTGAACAGTTGCAAAGATGTCTTAATTGTGTAAAGAATTGGTGTAGTCAT  
GACTTTAGCTGATACTCTTATGTACGAGATCTGTCTCTGCTGTTAACTTCATTGGATTAATCAGCTGGTTTTCAA  
CTCTACTGCGAAACAAAAATAGCTCCTTAAAGTACTGTTCTCCTTCAGTGGCATGTAGTTATCTAATCAAGACA  
CCTCATTCAAACAAAACCTGCCTTAGGAAAATTTAATATATTTTAAATTATTTTAAAGAAATACAACATCTTAT  
TCTTTAGCTTTCTTAATCGGTGCTTTATGGAGGCCAGTGTAACGTTACATGACTCGTTGAGAAAGTTGAGGAATT  
TCCTCTACCACCTTTGTTGCTTGAAGAAAAACATGTCTTTTCAAATGAGAGGCTTTCATTGAAGAAAAAGAAAA  
AACAAACAGTTAAAAA



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**FIGURE 363**

MEAGEEPLLLAELKPGRPHQFDWKSSCETWSVAFSPDGSWFAWSQGHCIIVKLIPWPLEEQFIPKGFEAKSRSSKN  
ETKGRGSPKEKTLDCGQIVWGLAFSPWPSPPSRKLWARHHPQVPDVSLVLATGLNDGQIKIWEVQTGLLLLNLS  
GHQDVVRDLSFTPSGSLILVSASRDKTLRIWDLNKHGKQIQVLSGHLQWVYCCSISPDCSMLCSAAGEKSVFLWS  
MRSYTLIRKLEGHQSSVVS CDFSPDSALLVTASYDTNVIMWDPYTGERLRSLHHTQVDPAMDDSDVHISSLRSVC  
FSPEGLYLATVADDRLLRIWALELKTPIAFAPMTNGLCCTFFPHGGVIATGTRDGHVQFWTAPRVLSSLKHLCK  
ALRSFLTTYQVLALPIPKMKKEFLTYRTF

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**FIGURE 364**

ATATAACCGCGTGGCCCCGCGCGCGCGCTTCCCTCCCGGCGCAGTCACCGGCGCGGTCTATGGCTGCGACTTCTCT  
AATGTCTGCTTTGGCTGCCCGGCTGCTGCAGCCCCGCGCACAGCTGCTCCCTTCGCCTTCGCCCTTTCCACCTCGC  
GGCAGTTCGAAATGAAGCTGTTGTCAATTTCTGGAAGGAACTGGCCCAGCAGATCAAGCAGGAAGTGCGGCAGGA  
GGTAGAAGAGTGGGTGGCCTCAGGCAACAAACGGCCACACCTGAGTGTGATCCTGGTTGGCGAGAATCCTGCAAG  
TCACTCCTATGTCCTCAACAAAACCAGGGCAGCTGCAGTTGTGGGAATCAACAGTGAGACAATTATGAAACCAGC  
TTCAATTTTCAGAGGAAGAATTGTTGAATTTAATCAATAAACTGAATAATGATGATAATGTAGATGGCCTCCTTGT  
TCAGTTGCCTCTTCCAGAGCATATTGATGAGAGAAGGATCTGCAATGCTGTTTCTCCAGACAAGGATGTTGATGG  
CTTTCATGTAATTAATGTAGGACGAATGTGTTTGGATCAGTATTCCATGTTACCGGCTACTCCATGGGGTGTGTG  
GGAAATAATCAAGCGAACTGGCATTCCAACCCTAGGGAAGAATGTGGTTGTGGCTGGAAGGTCAAAAAACGTTGG  
AATGCCCATTGCAATGTTACTGCACACAGATGGGGCGCATGAACGTCCCGGAGGTGATGCCACTGTTACAATATC  
TCATCGATATACTCCCAAAGAGCAGTTGAAGAAACATAACAATTCTTGAGATATTGTAATATCTGCTGCAGGTAT  
TCCAAATCTGATCACAGCAGATATGATCAAGGAAGGAGCAGCAGTCATTGATGTGGGAATAAATAGAGTTCACGA  
TCCTGTAAGTGCACAAACCAAGTTGGTTGGAGATGTGGATTTTGAAGGAGTCAGACAAAAAGCTGGGTATATCAC  
TCCAGTTCCTGGAGGTGTTGGCCCCATGACAGTGGCAATGCTAATGAAGAATACCATTATTGCTGCAAAAAAGGT  
GCTGAGGCTTGAAGAGCGAGAAGTGCTGAAGTCTAAAGAGCTTGGGGTAGCCACTAATTAACTACTGTGTCTTCT  
GTGTCACAAACAGCACTCCAGGCCAGCTCAAGAAGCAAAGCAGGCCAATAGAAATGCAATATTTTTAATTTATTC  
TACTGAAATGGTTTAAAATGATGCCTTGTATTTATTGAAAGCTTAAATGGGTGGGTGTTTCTGCACATACCTCTG  
CAGTACCTCACCAGGGAGCATTCCAGTATCATGCAGGGTCCTGTGATCTAGCCAGGAGCAGCCATTAACTAGTG  
ATTAATATGGGAGACATTACCATATGGAGGATGGATGCTTCACCTTGTCAAGCACCTCAGTTACACATTGCGCTT  
TTCTAGGATTGCATTTCCCAAGTGCTATTGCAATAACAGTTGATACTCATTTTAGGTACCAGACCTTTTGAGTTC  
AACTGATCAAACCAAAGGAAAAGTGTGCTAGAGAAAATTGGGGAAAAGGTGAAAAAGAAAAAATGGTAGTAATT  
GAGCAGAAAAAAATTAATTTATATATGTATTGATTGGCAACCAGATTTATCTAAGTAGAACTGAATTGGCTAGGA  
AAAAAGAAAAACTGCATGTTAATCATTTTCCTAAGCTGTCCTTTTGAGGCTTAGTCAGTTTATTGGGAAAATGTT  
TAGGATTATTCCTTGCTATTAGTACTCATTTTATGTATGTTACCCTTCAGTAAGTTCTCCCCATTTAGTTTTCT  
AGGACTGAAAGGATTCTTTTCTACATTATACATGTGTGTTGTCATATTTGGCTTTTGCTATATACTTTAACTTCA  
TTGTTAAATTTTTGTATTGTATAGTTTCTTTGGTGTATCTTAAACCTATTTTTGAAAAACAACTTGGCTTGAT  
AATCATTTGGGCAGCTTGGGTAAGTACGCAACTTACTTTTCCACCAAAGAACTGTCAGCAGCTGCCTGCTTTTCT  
GTGATGTATGTATCCTGTTGACTTTTCCAGAAAATTTTTAAGAGTTTGAGTTACTATTGAATTTAATCAGACTTT  
CTGATTAAAGGGTTTTCTTTCTTTTTTAATAAAACACATCTGTCTGGTATGGTA

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**FIGURE 365**

MSALAAARLLQPAHSCSLRLRPFHLAAVRNEAVVISGRKLAQQIKQEVQRQEVEEWVASGNKRPHLSVILVGENPAS  
HSYVLNKTRAAAVVGINSETIMKPASISSEELNLNKLNNDDNVDGLLVQLPLPEHIDERRICNAVSPDKDVDG  
FHVINVGRMCLDQYSMLPATPWGVWEIIKRTGIPTLGKNVVVAGRSKNVGMPIAMLLHTDGAHERPGGDATVTIS  
HRYTPKEQLKKHTILADIVISAAGIPNLITADMIKEGAAVIDVGINRVHDPVTAKPKLVGDVDFEGVRQKAGYIT  
PVPGGVGPMTVAMLMKNTIIAAKKVLRLEEREVLKSKELGVATN

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**FIGURE 366**

GGTAGTTGGTTGTGGGCACTGGGTTAGAGGTATCACGTGGGGGCACTTTCGTCTTAGCTTTTGGACAAGACGCAG  
GCGCAACCCACGGCTGCTGCGGGGATCCTTGTGGCCCTTCCGGTCGGTGGAACCAATCCGTGCACAGAGAAGCGG  
GGCGAACTGAGGCGAGTGAAGTGGACTCTGAGGGCTACCGCTACCGCCACTGCTGCGGCAGGGGCGTGAGGGCA  
GAGGGCCGCGGAGGCCGAGTTGCAAACATGGCTCAGAGCAGAGACGGCGGAAACCCGTTGCGCGAGCCCAGCGA  
GCTTGACAACCCCTTTTCAAGACCCAGCTGTGATCCAGCACCGACCCAGCCGGCAGTATGCCACGCTTGACGTCTA  
CAACCCTTTTGAGACCCGGGAGCCACCACCAGCCTATGAGCCTCCAGCCCTGCCCCATTGCCTCCACCCCTCAGC  
TCCCTCCTTGCAGCCCTCGAGAAAGCTCAGCCCCACAGAACCTAAGAACTATGGCTCATACAGCACTCAGGCCTC  
AGCTGCAGCAGCCACAGCTGAGCTGCTGAAGAAACAGGAGGAGCTCAACCGGAAGGCAGAGGAGTTGGACCGAAG  
GGAGCGAGAGCTGCAGCATGCTGCCCTGGGGGGCACAGCTACTCGACAGAACAATTGGCCCCCTCTACCTTCTTT  
TTGTCCAGTTCAGCCCTGCTTTTTCCAGGACATCTCCATGGAGATCCCCCAAGAATTTCAGAAGACTGTATCCAC  
CATGTACTACCTCTGGATGTGCAGCACGCTGGCTCTTCTCCTGAACTTCCTCGCCTGCCTGGCCAGCTTCTGTGT  
GGAAACCAACAATGGCGCAGGCTTTGGGCTTTCTATCCTCTGGGTCTCTCTTTTCACTCCCTGCTCCTTTGTCTG  
CTGGTACCGCCCCATGTATAAGGCTTTCCGGAGTGACAGTTCATTCAATTTCTTCGTTTTCTTCTTCATTTTCTT  
CGTCCAGGATGTGCTCTTTGTCTCCAGGCCATTGGTATCCCAGGTTGGGGATTTCAGTGGCTGGATCTCTGCTCT  
GGTGGTGCCGAAGGGCAACACAGCAGTATCCGTGCTCATGCTGCTGGTCGCCCTGCTCTTCACTGGCATTGCTGT  
GCTAGGAATTGTATGCTGAAACGGATCCACTCCTTATACCGCCGCACAGGTGCCAGCTTTCAGAAGGCCACAGCA  
AGAATTTGCTGCTGGTGTCTTCTCCAACCCTGCGGTGCGAACCAGCTGCCAATGCAGCCGCTGGGGCTGCTGA  
AAATGCCTTCCGGGCCCCGTGACCCCCTGACTGGGATGCCCTGGCCCTGCTACTTGAGGGAGCTGACTTAGCTCCC  
GTCCCTAAGGTCTCTGGGACTTGAGAGACATCACTAACTGATGGCTCCTCCGTAGTGCTCCCAATCCTATGGCC  
ATGACTGCTGAACCTGACAGGCGTGTGGGGAGTTCAGTGTGACCTAGTCCCCCATCAGGCCACACTGCTGCCAC  
CTCTCACACGCCCCAACCAGCTTCCCTCTGCTGTGCCACGGCTGTTGCTTCGGTTATTTAAATAAAAAGAAAGT  
GGAAGTGGAACTGACAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 367**

MAQSRDGGNPFAEPSELDNPFQDPAVIQHRPSRQYATLDVYNPFETREPPPAYEPPAPAPLPPPSAPSLQPSRKL  
SPTEPKNYGSYSTQASAAAATAELLKKQEELNRKAEELDRRERELQHAALGGTATRQNNWPPLPSFCPVQPCFFQ  
DISMEIPQEFQKTVSTMYYLWMCSTLALLLNFLACLASFVETNNGAGFGLSILWVLLFTPCSFVCWYRPMYKAF  
RSDSSFNFFVFFFIFFVQDVLFLVLAIGIPGWGFSGWISALVVPKGNTAVSVLMLLVALLFTGIAVLGIVMLKRI  
HSLYRRTGASFQKAQQEFAAGVFSNPAVRTAAANAAAGAAENAFRAP

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**FIGURE 368**

GAATTCCGGGTTTGAAAAGGAGTTCTAGGGAAGAAGAGAGTTAGTTAGCACATCAATGGGAGCAGGGCTCTTACC  
CCACGTGGTGTTACATATATATTATTTTCATACATGGTTTCTGGCTCATAAGTTCCCTTAGCCCTTGCTATAGTCT  
TTTGTGTTCCGTCTTAAGGGCAGGACTGTACTCTTCCCTCACCTTTCTAATTGTGCATCTTAAGACCTTCCCCAG  
AGAGGGTGGTGCCCTGTAGTTGTGGGAAGGAATGCTGGCATCATGAAGCTTCCATAAAAACCCGAGAAACGAGCT  
TCTGGATAGCTGGACACATGGAGGTCTTGGAGGGTGGAGCCCAGGGAGGCATGGAAGCTCCACAGCCCTTCCCC  
ATACCTTACCCTATTTCTCTGTATCCTTTGTAATATCCTTTATGATAAACCAGCAAATGTGTGTAAATGTTTCC  
CTAAGGTCTGTGGCCACTCCAGCAAATTAATTGAACCTAAAGAGGGGGTCTGTGGGAACCCCAACTTGAAGCCAGT  
CAGTCAGAAGTTCTGGATGTCCAGACTTCAGACTGGTGTCTGAAAGGGTGGAGGCAGTCTTGGGGACCGAGCCCC  
CAATCTATGGGATCTGACACTATCTCCAGTAGTGTGGAATTGAGTCACCAGCGTGTCCACTGGTTAGTGTGTGA  
GAAACTCCCTACCATTGGTTCACAGAAGTCTTCTTCTGTGTTGATAGTTGTAGTGTGACAGCAGAGGAAAAACAAA  
GTCAGAAAAGAGTTTTCCCGAACACACCCAATTTCTCCATTTTACTATCCATTTCCACAAACACTGACTACAATAG  
AAGTATAAAAATTACTCCACTGCATCATTGAGCTTTCCATCTCTCTCAGACACCAAGCTGCAGATCCAGGTCAGT  
TTGTAGGTCACCACCTAGAGGGGAGGAAGACCTCGCTTTGGAGAGTGGGAATAAAACGCTCGTGGAAAAAGGGTAC  
ACGCTTTTCTGGGAAAGTGAGGCCACCATGGCTCTGGAGAAGTCTCTTGTCCGGCTCCTTCTGCTTGTCTGCTGATA  
CTGCTGGTGTCTGGGCTGGGTCCAGCCTTCCCTGGGCAAGGAATCCCGGGCCAAGAAATTCCAGCGGCAGCATATG  
GACTCAGACAGTTCCCCCAGCAGCAGCTCCACCTACTGTAACCAAATGATGAGGCGCCGGAATATGACACAGGGG  
CGGTGCAAACCAGTGAACACCTTTGTGCACGAGCCCCTGGTAGATGTCCAGAATGTCTGTTTCCAGGAAAAGGTC  
ACCTGCAAGAACGGGCAGGGCAACTGCTACAAGAGCAACTCCAGCATGCACATCACAGACTGCCGCCTGACAAAC  
GGCTCCAGGTACCCCAACTGTGCATACCGGACCAGCCCGAAGGAGAGACACATCATTGTGGCCTGTGAAGGGAGC  
CCATATGTGCCAGTCCACTTTGATGCTTCTGTGGAGGACTCTACCTTAAGGTGAGAGCAGCGAGATACCCACCTC  
CCTCAACCTCATCCTCTCCACAGCTGCCTCTTCCCTCTTCCCTTCCCTGCTGTGAAAGAAGTAACTACAGTTAGGG  
CTCCTATTCAACACACACATGCTTCCCTTTCTGAGCCGGAATTC

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**FIGURE 369**

MALEKSLVRLLLLVLILLVLGWVQPSLGKESRAKKFQRQHMDSDSSPSSSSTYCNQMMRRRNMTQGRCKPVNTFV  
HEPLVDVQNVCFQEKVTCKNGQGNCYKSNSMHIIDCRLTNGSRYPNCAYRTSPKERHIIVACEGSPYVPVHFDA  
SVEDST

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**FIGURE 370A**

CTTCTCTCCCAGGGCGGTGCGACCCGGAGCTCCAGCGCCCGAGTCTCCACTTCGTTTGCTGAAACTTGCTTTCTA  
CCAGCTAAGAACCATGCTGCGAGTGATTGTGGAATCTGCCAGCAATATCCCTAAAACGAAATTTGGCAAGCCGGA  
TCCTATTGTTTTCTGTCAATTTTTAAGGATGAGAAAAAGAAAACAAAGAAAGTTGATAATGAATTGAACCCTGTCTG  
GAATGAGATTTTGGAGTTTGACTTGAGGGGTATACCACTGGACTTTTCATCTTCCCTTGGGATTATTGTGAAAGA  
TTTTGAGACAATTGGACAAAATAAATTAATTGGCACGGCGACTGTAGCCCTGAAGGACCTGACTGGTGACCAGAG  
CAGATCCCTGCCGTACAAGCTGATCTCCCTGCTAAATGAAAAAGGGCAAGATACTGGGGCCACCATTGACTTGGT  
GATCGGCTATGATCCGCCTTCTGCTCCACATCCAAATGACCTGAGCGGGCCAGCGTGCCAGGCATGGGAGGAGA  
TGGGGAAGAAGATGAAGGTGATGAAGACAGGTTGGACAATGCAGTCAGGGGCCCTGGGCCCCAAGGGGCCAGTTGG  
GACGGTGTGCGAAGCTCAGCTTGCTCGGAGGCTCACCAAAGTAAAGAACAGCCGGCGGATGCTGTCAAATAAGCC  
ACAGGACTTCCAGATCCGCCTCCGAGTGATTGAGGGCCGACAGTTAAGTGGTAACAACATAAGGCCCTGTGGTCAA  
AGTTCACGCTCTGTGGCCAGACACACCGAACAAGAATCAAGAGAGGAAACAACCCTTTTTTTTGATGAGTTGTTTTT  
CTACAATGTCAACATGACCCCTTCTGAATTGATGGATGAGATCATCAGCATCCGGGTTTATAATTCTCACTCTCT  
GCGGGCAGATTGTCTGATGGGGGAATTTAAGATTGATGTTGGATTGTTTATGATGAACCTGGCCATGCTGTCTAT  
GAGAAAAGTGGCTTCTTCTCAATGACCCGGAAGATACCAGTTCAGGTTCTAAAGGTTATATGAAAAGTCAGCATGTT  
TGTCTTGGGAACCGGAGATGAGCCTCCTCCTGAGAGACGAGATCGTGATAATGACAGTGATGATGTGGAGAGTAA  
TTTGTTACTCCCTGCTGGCATTGCCCTCCGGTGGGTGACCTTCTTGCTGAAAATCTACCGAGCTGAGGACATCCC  
CCAGATGGATGATGCCTTCTCACAGACAGTAAAGGAAATATTTGGAGGCAATGCAGATAAGAAAAATCTCGTGGA  
TCCTTTTGTAGAAGTTTTCTTTGCTGGAAAAAAGGTTTGTACAAACATAATTGAGAAAAATGCAAAACCAGAGTG  
GAATCAGGTCGTCAATCTTCAGATCAAGTTTCCCTTCAGTGTGTGAAAAATAAACTAACAATATATGACTGGGA  
CCGCTCTTACTAAAAATGATGTAGTTGGAACAACATATCTACACCTCTCTAAAATTGCTGCCTCTGGTGGGGAAGT  
GGAAGATTTCTCATCTTCGGGAACCTGGGGCTGCATCATATACAGTAAACACAGGAGAAACAGAGGTAGGCTTTGT  
TCCAACGTTTGGACCTTGTTACCTGAATCTTTATGGAAGCCCCAGGGAGTACACGGGATTCCCAGACCCCTATGA  
TGAGCTGAATACTGGAAGGGGGAAGGAGTTGCCTACAGAGGCAGGATCTTGGTTGAATTAGCCACTTTTCTTGA  
GAAGACACCACAGATAAAAAGCTTGAGCCCATTTCAAATGATGACCTGCTGGTTGTTGAGAAATACCAGCGAAG  
GCGGAAGTACAGCCTGTCTGCCGTGTTTCATTACGCCACCATGTTGCAAGATGTTGGTGAGGCCATTACAGTTGA  
AGTCAGCATTGGGAACTATGGCAACAAGTTTGACACCACCTGTAAGCCTTTGGCATCAACAACCTCAGTACAGCCG  
TGCTGTATTTGATGGCAACTACTATTACTTGCCTTGGGCCCACACCAAGCCAGTTGTTACCCTGACTTCATA  
CTGGGAGGATATTAGTCATCGCCTGGATGCGGTGAACACTCTCCTAGCTATGGCAGAACGGCTGCAACAAATAT  
AGAAGCTCTAAAATCAGGGATACAAGGTAAAATTCTTGCAAACCAGCTGGCTGAATTGTGGCTGAAGCTGATAGA  
TGAAGTTATAGAAGACACGAGATACAGTTGCCTCTCACAGAAGGAAAAGCCAACGTCACAGTTCTCGATACTCA  
GATCCGAAAGCTGCGGTCCAGGTCTCTCTCCCAAATACATGAGGCGGCTGTGAGGATGAGGTGCGAAGCCACAGA  
TGTGAAGTCCACACTGGCAGAAATTGAGGACTGGCTTGATAAATTAATGCAGCTGACTGAAGAGCCACAGAACAG  
CATGCCTGACATCATCTGATGATCCGGGGAGAGAAAGAGACTGGCCTATGCACGAATTCCCGCACATCAGGT  
CTTGTAATCCACCAGTGGTGAGAATGCATCTGGAATACTGTGGGAAAACCCAAACCATCTTTCTGAAGTATCC  
ACAGGAGAAAAACAACGGGCCAAAGGTGCCTGTGGAGTTGCGAGTGAACATCTGGCTAGGCTTAAGTGCTGTGGA  
GAAGAAGTTTTAACAGCTTCGAGAAAGGAACCTTTCACCGTCTTTGCTGAAATGTATGAAAATCAAGCTCTCATGTT  
TGGAAAAATGGGGTACTTCTGGATTAGTAGGACGTCATAAGTTTTCTGATGTACAGGAAAAATAAACTCAAGAG  
GGAATTTTTTCTGCCTCCAAAAGGCTGGGAATGGGAAGGAGAGTGGATAGTTGATCCTGAAAGAAGCTTGCTGAC  
TGAGGCAGATGCAGGTACACGGAGTTCACTGATGAAGTCTATCAGAACGAGAGCCGCTACCCCGGGGGCGACTG  
GAAGCCGGCCGAGGACACCTACACGGATGCGAACGGCGATAAAGCAGCATCACCCAGCGAGTTGACTTGTCTCTC  
AGGTTGGGAATGGGAAGATGATGCATGGTCTTATGACATAAATCGAGCGGTGGATGAGAAAGGCTGGGAATATGG  
AATCACCATTCTCTCTGATCATAAGCCCAATCCTGGGTTGCAGCAGAGAAAATGTACCACACTCATAGACGGCG  
AAGGCTGGTCCGAAAACGCAAGAAAGATTTAACACAGACTGCTTCAAGCACCGCAAGGGCCATGGAGGAATTGCA  
AGACCAAGAGGGCTGGGAATATGCTTCTCTAATTGGCTGGAAATTTCACTGGAAACAACGTAGTTTCAATACCTT  
CCGCCGAGACGCTGGAGGAGAAAAATGGCTCCTTCAGAAACACATGGTGCAGCTGCCATCTTTAACTTGAAGG  
TGCCCTTGGGGCAGACACTACCGAAGATGGGGATGAGAAGAGCCTGGAGAAACAGAAGCACAGTGCCACCCTGT  
GTTTCGGAGCAAAACACCCCATTTGTTTCTGCAATTTTGACAGAGTCTACATCTACCATCTGCGCTGCTATGTCTA  
TCAAGCCAGAAACCTCTTGGCTTTAGATAAGGATAGCTTTTCAGATCCATATGCTCATATCTGTTTCTCCATCG



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**FIGURE 370B**

GAGCAAAACCACTGAGATCATCCATTCAACCCTGAATCCCACGTGGGACCAAACAATTATATTTCGATGAAGTTGA  
AATCTATGGGGAACCCCAAACAGTTCTACAGAATCCACCCAAAGTTATCATGGAACTTTTTGACAATGACCAAGT  
GGGCAAAGATGAATTTTTAGGACGAAGCATTCTCTCTCTGTGGTGAACTGAACTCAGAAATGGACATCACACC  
CAAACCTCTCTGGCACCCAGTAATGAATGGAGACAAAGCCTGCGGGGATGTTCTTGTAAGTGCAGAGCTGATTCT  
GAGGGGCAAGGATGGCTCCAACCTTCCCATTTCTCCCCCTCAAAGGGCGCCAAATCTATACATGGTCCCCAGGG  
GATCAGGCCTGTGGTCCAGCTCACTGCCATTGAGATTCTAGCTTGGGGCTTAAGAAATATGAAAACTTCCAGAT  
GGCTTCTATCACATCCCCAGTCTTGTTGTGGAGTGTGGAGGAGAAAGGTGGAATCGGTGGTGATCAAAAACCT  
TAAGAAGACACCCAACCTTTCCAAGTTCTGTTCTCTTCATGAAAGTGTCTTGCCCAAGGAGGAATTGTACATGCC  
CCCACTGGTGATCAAGGTATCGACCACAGGCAGTTTGGGCGGAAGCCTGTCGTCGGCCAGTGCACCATCGAGCG  
CCTGGACCGCTTTCGCTGTGACCCTTATGCAGGGAAAGAGGACATCGTCCACAGCTCAAAGCCTCCCTTCTGTC  
TGCCCCACCATGCCGGGACATCGTTATCGAAATGGAAGACACCAAACCATTACTGGCTTCTAAGCTGACAGAAAA  
GGAGGAAGAAATCGTGGACTGGTGGAGTAAATTTTATGCTTCCCTCAGGGGAACATGAAAAATGCGGACAGTATAT  
TCAGAAAGGCTATTCCAAGCTCAAGATATATAATTGTGAACTAGAAATGTAGCAGAATTTGAGGGCCTGACAGA  
CTTCTCAGATACGTTCAAGTTGTACCGAGGCAAGTCGGATGAAAAATGAAGATCCTTCTGTGGTTGGAGAGTTTAA  
GGGCTCCTTTTCGGATCTACCCTCTGCCGGATGACCCACAGCGTGCCAGCCCTCCAGACAGTTTTCGGGAATTACC  
TGACAGCGTCCACAGGAATGCACGGTTAGGATTTACATTGTTTCGAGGCTTAGAGCTCCAGCCCCAGGACAACAA  
TGGCCTGTGTGACCCTTACATAAAAAATAACACTGGGCAAAAAAGTCATTGAAGACCGAGATCACTACATTCCCAA  
CACTCTCAACCCAGTCTTTGGCAGGATGTACGAACTGAGCTGCTACTTACCTCAAGAAAAAGACCTGAAAAATTC  
TGTCTATGATTATGACACCTTTACCCGGGATGAAAAAGTAGGAGAAACAATTATTGATCTGGAACACCGATTCCCT  
TTCCCGCTTTGGTCCCCTGCGGCATACAGAGGAGTACTGTGTTCTGGAGTCAATACCTGGCGAGATCAACT  
GAGACCAACACAGCTGCTTCAAATGTGCGCCAGATTCAAAGGCTTCCACAAACCATCCTTTCCGAAGATGGGAG  
TAGAATCAGATATGGAGGACGAGACTACAGCTTGGATGAATTTGAAGCCAACAAAATCCTGCACACGACCTCGG  
GGCCCCGTAAGAGCGGCTTGCTCTTCACATCCTCAGGACTCAGGGGCTGGTCCCTGAGCACGTGGAAACAAGGAC  
TTTGACAGCACCTTCCAGCCCCAACATTTCCAGGGGAAAACCTCAGATGTGGGTGGATGTTTTCCCCAAGAGTTT  
GGGGCCACAGGCCCTCCTTTCAACATCACACCCCGGAAAGCCAAGAAATACTACCTGCGTGTGATCATCTGGAA  
CACCAAGGACGTTATCTTGGACGAGAAAAGCATCACAGGAGAGGAAATGAGTGACATCTACGTCAAAGGCTGGAT  
TCCTGGCAATGAAGAAAACAAACAGAAAACAGATGTCCATTACAGATCTTTGGATGGTGAAGGGAATTTTAACTG  
GCGATTTGTTTTCCCGTTTGACTACCTTCCAGCCGAACAACTCTGTATCGTTGCGAAAAAAGAGCATTTCTGGAG  
TATTGACCAAACGGAATTTGAAATCCCACCCAGGCTGATCATTCAGATATGGGACAATGACAAGTTTTCTCTGGA  
TGACTACTTGGGTTTCCTAGAACTTGACTTGCGTCACACGATCATTCCTGCAAAATCACCAGAGAAATGCAGGTT  
GGACATGATTCCGGACCTCAAAGCCATGAACCCCTTAAAGCCAAGACAGCCTCCCTCTTTGAGCAGAAAGTCCAT  
GAAAGGATGGTGGCCATGCTACGCAGAGAAAGATGGCGCCCGCGTAATGGCTGGGAAAGTGGAGATGACATTGGA  
AATCCTCAACGAGAAGGAGGCCGACGAGAGGCCAGCCGGGAAGGGGCGGGACGAACCCAACATGAACCCCAAGCT  
GGACTTACCAAAATCGACCAGAAACCTCCTTCCCTCTGGTTACCAACCCATGCAAGACCATGAAGTTTCATCGTGTG  
GCGCCGCTTTAAGTGGGTATCATCGGCTTGCTGTTTCTGCTTATCCTGCTGCTCTTCGTGGCCGTGCTCCTCTA  
CTCTTTTGCCGAACTATTTGTCAATGAAGATTGTAAAGCCAAATGTGTAACAAAGGCAAAGGCTTCATTTCAAGAG  
TCATCCAGCAATGAGAGAATCCTGCCTCTGTAGACCAACATCCAGTGTGATTTTGTGTCTGAGACCACACCCAG  
TAGCAGGTTACGCCATGTCACCGAGCCCCATTGATTCCCAGAGGGTCTTAGTCCTGGAAAGTCAGGCCAACAAAGC  
AACGTTTGCATCATGTTATCTCTTAAGTATTAAGATTTTATTTTCTAAAGTTTAAATCATGTTTTTCAAAATAT  
TTTTCAAGGTGGCTGGTTCCATTTAAAAATCATCTTTTTATATGTGTCTTCGGTTCTAGACTTCAGCTTTTGGA  
ATTGCTAAATAGAATTCAAAAATCTCTGCATCCTGAGGTGATATACTTCATATTTGTAATCAACTGAAAGAGCTG  
TGCATTATAAAATCAGTTAGAATAGTTAGAACAATTCTTATTTATGCCACAACCATTGCTATATTTTGTATGGA  
TGTATAAAAGTCTATTTAACCTCTGTAATGAACTAAATAAAAAATGTTTCACCTTTAAAAA

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**FIGURE 371**

MLRVIVESASNIPKTKFGKPDPIVSVIFKDEKKKTKKVDNELNPVWNEILEFDLRGIPLDFSSSLGIIVKDFETI  
GQNKLIGHTATVALKDLTGDSRSLPYKLISLLNEKGQDTGATIDLVIIGYDPPSAPHPNDLSGFSVPGMGGDGEED  
EGDEDRLDNAVRGPGPKGPVGTVSEAQLARRLTKVKNSRRMLSNKPQDFQIRVRVIEGRQLSGNNIRPVKVHVC  
GQTHRTRIKRGNNPFFDELFFYNVNMTPSELMDIISIRVYNHSLRADCLMGFEKIDVGFVYDEFGHAVMRKWL  
LLNDPEDTSSSGSKGYMKVSMFVLGTGDEPPFERDRDNDSDDVESNLLLPAGIALRWVTFLKITYRAEDIPQMDD  
AFSQTVKEIFGGNADKKNLVDPFVEVSFAGKKVCTNIEKNANPEWNQVNLQIKFPSVCEKIKLTIYDWRDLTK  
NDVVGTTYLHLSKIAASGGEVEDFSSSGTGAASYTVNTGETEVGFVPTFGPCYLNLYGSPREYTGFPDPYDELNT  
GKGEGVAYRGRILVELATFLEKTPPDKKLEPISNDLLVVEKYQRRRKYSLSAVFHSATMLQDVGEAIIQFEVSIG  
NYGNKFDTTCKPLASTTQYSRAVFDGNYYYLPPWAHTKPVVTLTSYWEDISHRLDAVNTLLAMAERLQTNIEALK  
SGIQGKIPANQLAELWLKLIDEVIEDTRYTLPLTEGKANVTVLDTQIRKLRSRSLSQIHEAAVRMRSEATDVKST  
LAEIEDWLDKLMQLTEEPQNSMPDIIIMIRGEKRLAYARIPAHQVLYSTGENASGKYCGKTQTIFLKYPOEKN  
NGPKVPVELRVNIWLGLSAVEKKFNSFAEGTFTVFAEMYENQALMFGKWGTSGLVGRHKFSDVTGKIKLKREFFL  
PPKGWEWEGEWIVDPERSLLTEADAGHTEFTDEVYQNESRYPGGDWKPAEDTYTDANGDKAASPSELTCPPGWEW  
EDDAWSYDINRAVDEKWEYGITIPPDHKPKSWVAAEKMYHTRRRRLVRKRKKDLTQTASSTARAMEELQDQEG  
WEYASLIGWKFWKQRSSDTFRRRRWRRKMAPSETHGAAAIKLEGALGADTTEDGDEKSLEKQKHSATTVFGAN  
TPIVSCNFDVYIYHLRCYVYQARNLLALDKDSFSDPYAHICFLHRSKTTETIIHSTLNPTWDQTIIIFDEVEIYGE  
PQTVLQNPPKVIMELFDNDQVGKDEFLGRSIFSPVVKLNSEMDITPKLLWHPVMNGDKACGDVLVTAEILIRGKD  
GSNLPILPPQRAPNLYMVPQGIRPVVQLTAIEILAWGLRNMKNFQMASITSPSLVVECGGERVESVVIKNLKKTP  
NFPSSVLFMKVFLPKEELYMPPLVIKVIDHRQFGRKPVVGQCTIERLDRFRCDPYAGKEDIVPQLKASLLSAPPC  
RDIVIEMEDTKPLLASKLTEKEEEIVDWSKFYASSGEHEKCGQYIQKGYSKLKIYNCELENVAEFEGLTDFSDT  
FKLYRGKSDENEDPSVVGFEFGSFRIYPLPDDPSVPAPPRQFRELPDSVPQECTVRIYIVRGLELQPDNNGLCD  
PYIKITLGKKVIEDRDHYIPNTLNPVFGRMIELSCYLPQEKDLKISVYDYDTFTRDEKVGETIIDLENRFLSRFG  
SHCGIPEEYCVSGVNTWRDQLRPTQLLQNVARFKGFPQPILEDGSRIRYGGRDYSLDEFEANKILHQHLGAPEE  
RLALHILRTQGLVPEHVETRTLHSTFQPNISQGLQMWVDVFPKSLGPPGPPFNITPRKAKKYYLRVLIWNTKDV  
ILDEKSITGEEMSDIYVKGWIPGNEENKQKTDVHYRSLDGEGNFNWRVFVFFDYLPAEQLCIVAKKEHFWSIDQT  
EFRIPPRLI IQIWDNDKFSLDDYLGFELEDLRHTIIPAKSPEKCRMDMIPDLKAMNPLKAKTASLFEQKSMKGWW  
PCYAEKDGARVMAGKVEMTLEILNEKEADERPAGKGRDEPNMNPKLDLPN

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**FIGURE 372**

GGGCTGCGCTGTCCAGCTGTGGCTATGGCCCCAGCCCCGAGATGAGGAGGGAGAGAACTAGGGGCCCCGAGGCCT  
GGGAATTTCCGTCCCCACCAAGTCCGGATGCTCACTCCAAAGTCTCAGCAGGCCCTGAGGGAGGGAGCTGTCA  
GCCAGGGAACACCGAGAACACCATCACCAATGACAACCAGTCACCAGCCTCAGGACAGATACAAAGCTGTCTGGCT  
TATCTTCTTCATGCTGGGTCTGGGAACGCTGCTCCCGTGGAAATTTTTTCATGACGGCCACTCAGTATTTACAAA  
CCGCTTGACATGTCCCAGAATGTGTCCTTGGTCACTGCTGAAGTGAAGGACGCCCAGGCGTCAGCCGCCCC  
TGCAGCACCTTGCTGAGCGGAACCTCTCTCAGTGCCATCTTCAACAATGTCATGACCCTATGTGCCATGCTGCC  
CCTGCTGTTATTACCTACCTCAACTCCTTCTGTCATCAGAGGATCCCCAGTCCGTACGGATCCTGGGCAGCCT  
GGTGGCCATCCTGCTGGTGTCTGATCACTGCCATCCTGGTGAAGGTGCAGCTGGATGCTCTGCCCTTCTTTGT  
CATCACCATGATCAAGATCGTGCTCATTAATTCAATTTGGTGCCATCCTGCAGGGCAGCCTGTTTGGTCTGGCTGG  
CCTTCTGCCCTGCCAGCTACACGGCCCCCATCATGAGTGGCCAGGGCCTAGCAGGCTTCTTTGCCCTCCGTGGCCAT  
GATCTGCGCTATTGCCAGTGGCTCGGAACATATCAGAAAGTGCCTTCGGCTACTTTATCACAGCCTGTGCTGTTAT  
CATTTTGACCATCATCTGTTACCTGGGCCTGCCCGCCTGGAATTCTACCGCTACTACCAGCAGCTCAAGCTTGA  
AGGACCCGGGGAGCAGGAGACCAAGTTGGACCTCATTAGCAAAGGAGAGGAGCAAGAGCAGGCAAAAGAGGAATC  
TGGAGTTTTCAGTCTCCAACCTCTCAGCCACCAATGAAAGCCACTCTATCAAAGCCATCCTGAAAAATATCTCAGT  
CCTGGCTTTCTCTGTCTGCTTTCATCTTCACTATCACCATTTGGGATGTTTCCAGCCGTGACTGTTGAGGTCAAGTC  
CAGCATCGCAGGCAGCAGCACCTGGGAACGTTACTTCATTCCCTGTGTCCTGTTTCTTGACTTTCAATATCTTTGA  
CTGGTTGGGCCGGAGCCTCACAGCTGTATTATGTGGCCTGGGAAGGACAGCCGCTGGCTGCCAAGCCTGGTGCT  
GGCCCGGCTGGTGTGTTGTGCCACTGCTGCTGTGCAACATTAAGCCCCGCCGCTACCTGACTGTGGTCTTCGA  
GCACGATGCCTGGTTTCATCTTCTTCATGGCTGCCTTTGCCTTCTCCAACGGCTACCTCGCCAGCCTCTGCATGTG  
CTTCGGGCCCCAAGAAAGTGAAGCCAGCTGAGGCAGAGACCGCAGGAGCCATCATGGCCTTCTTCTGTGTCTGGG  
TCTGGCACTGGGGGCTGTTTTCTCCTTCTGTTCCGGGCAATTGTGTGACAAGGATGGACAGAAGGACTGCCTG  
CCTCCCTCCCTGTCTGCCTCCTGCCCCCTCCTTCTGCCAGGGGTGATCCTGAGTGGTCTGGCGGTTTTTCTTCT  
AACTGACTTCTGCTTTCCACGGCGTGTGCTGGGCCCCGATCTCCAGGCCCTGGGGAGGGAGCCTCTGGACGGACA  
GTGGGGACATTGTGGGTTTGGGGCTCAGAGTCGAGGGACGGGGTGTAGCCTCGGCATTTGCTTGAGTTTCTCCAC  
TCTTGGCTCTGACTGATCCCTGCTTGTGTCAGGCCAGTGAGGCTCTTGGGCTTGGAGAACACGTGTGTCTCTGTG  
TATGTGTCTGTGTGTCTGCGTCCGTGTCTGTGTCAGACTGTCTGCCTGTCTTGGGGTGGCTAGGAGCTGGGTCTGAC  
CGTTGTATGGTTTGACCTGATATACTCCATTCTCCCTGCGCCTCCTCCTCTGTGTTTTTTCCATGTCCCCCTCC  
CAACTCCCCATGCCAGTTTTTACCCATCATGCACCTGTACAGTTGCCACGTTACTGCCTTTTTTAAAAATATA  
TTTGACAGAAACCAGGTGCCTTCAGAGGCTCTCTGATTTAAATAAACCTTTCTTGTTTTTTT

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**FIGURE 373**

MTTSHQPQDRYKAVWLIFFMLGLGTLTPWNFFMTATQYFTNRLDMSQNVSLVTAELSKDAQASAAPAAPLPERNS  
LSAIFNNVMTLCAMLPLLLFTYLNSTFLHQRIPQSVRILGSLVAILLVFLITAILVKVQLDALPFFVITMIKIVLI  
NSFGAILQGSLFGLAGLLPASYTAPIMSGQGLAGFFASVAMICAIAAGSELSAFAFGYFITACAVIILTIICYLG  
LPRLEFYRYYQQLKEGPGEQETKLDLISKGEEPRAGKEESGVSVSNSQPTNESHSHKAILKNISVLAFSVCFTF  
TITIGMFPAVTVEVKSSIAGSSTWERYFIPVSCFLTFFNIFDWLGRSLTAVFMWPGKDSRWLP SLVLARLVFVPLL  
LLCNIKPRRYLTVVFEHDAWFIFFMAAFASFNGYLASLCMCFGPKKVKPAEAETAGAIMAFFLCLGLALGAVFSF  
LFRAIV

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**FIGURE 374**

CCTGGGCGCGCGGGCTGGATGAGCCGGGAGCTCCCTGCTGCCGGTCATACCACAGCCTTCATCTGCGCCCTGGG  
GCCAGGACTGCTGCTGTCACTGCCATCCATTGGAGCCAGCACCCCTCCCCGCCATCCTTCGGACAGCAACTC  
CAGCCCAGCCCCGCGTCCCTGTGTCCACTTCTCCTGACCCCTCGGCCGCCACCCAGAAGGCTGGAGCAGGGACG  
CCGTCGCTCCGCGCCCTGCTCCCTCGGGTCCCCGTGCGAGCCACGCCGGCCCCGGTGCCCGCCCGCAGCCCT  
GCCACTGGACACAGGATAAGGCCCAGCGCACAGGCCCCACGTGGACAGC**ATCG**ACCGCGGCACGCTCCCTCTGG  
CTGTTGCCCTGCTGCTGGCCAGCTGCAGCCTCAGCCCCACAAGTCTTGCAGAAACAGTCCATTGTGACCTTCAGC  
CTGTGGGCCCCGAGAGGGGCGAGGTGACATATACCACTAGCCAGGTCTCGAAGGGCTGCGTGGCTCAGGCCCCCA  
ATGCCATCCTTGAAGTCCATGTCCTCTTCCTGGAGTTCCCAACGGGCGCGTCACAGCTGGAGCTGACTCTCCAGG  
CATCCAAGCAAAATGGCACCTGGCCCCGAGAGGTGCTTCTGGTCCCTCAGTGTAACAGCAGTGTCTTCTGCATC  
TCCAGGCCCTGGGAATCCCACTGCACCTGGCCTACAATTCCAGCCTGGTCACCTTCCAAGAGCCCCGGGGGTCA  
ACACCACAGAGCTGCCATCCTTCCCCAAGACCCAGATCCTTGAGTGGGCAGCTGAGAGGGGCCCCATCACCTCTG  
CTGCTGAGCTGAATGACCCCCAGAGCATCCTCCTCCGACTGGGCCAAGCCCAGGGGTCACTGTCTTCTGCATGC  
TGGAAGCCAGCCAGGACATGGGCCGCACGCTCGAGTGGCGGCCGCGTACTCCAGCCTTGGTCCGGGGCTGCCACT  
TGGAAGGCGTGGCCGGCCACAAGGAGGCGCACATCCTGAGGGTCTGCGGGGCCACTCGGCCGGGCCCCGGACGG  
TGACGGTGAAAGTGGAAGTGAAGTGAAGTGCAGCTGCGCACCCGGGGATCTCGATGCCGTCTCATCCTGCAGGGTCCCCCTACG  
TGTCTGGCTCATCGACGCCAACCACAACATGCAGATCTGGACCCTGGAGAATACTCCTTCAAGATCTTTCCAG  
AGAAAAACATTCGTGGCTTCAAGCTCCCAGACACACCTCAAGGCCTCTGGGGGAGGCCCGGATGCTCAATGCCA  
GCATTGTGGCATCCTTTCGTGGAGCTACCGCTGGCCAGCATTGTCTCACTTCATGCCTCCAGCTGCGGTGGTAGGC  
TGCAGACCTCACCCGCACCGATCCAGACCACTCCTCCCAAGGACACTTGTAGCCCGAGCTGCTCATGTCTTGA  
TCCAGACAAAGTGTGCCGACGACGCCATGACCTGGTACTAAAGAAAGAGCTTGTTCGCGATTTGAAGTGACCA  
TCACGGGCCTGACCTTCTGGGACCCAGCTGTGAGGCAGAGGACAGGGGTGACAAGTTTGTCTTGCAGTGTCTT  
ACTCCAGCTGTGGCATGCAGGTGTGAGCAAGTATGATCAGCAATGAGGCGGTGGTCAATATCCTGTGAGCTCAT  
CACCACAGCGGAAAAAGGTGCACTGCCTCAACATGGACAGCCTCTCTTCCAGCTGGGCCTCTACCTCAGCCAC  
ACTTCTCCAGGCCCTCAACACCATCGAGCCGGGGCAGCAGAGCTTTGTGAGGTGAGAGTGTCCCCATCCGTCT  
CCGAGTTCTGCTCCAGTTAGACAGCTGCCACCTGGACTTGGGGCCTGAGGGAGGCACCGTGGAAGTCAATCCAGG  
GCCGGGCGGCCAAGGGCAACTGTGTGAGCCTGCTGTCCCCAAGCCCCGAGGGTGACCCGCGCTTCAGCTTCTCC  
TCCACTTCTACACAGTACCCATACCCAAAACCGGCACCTCAGCTGCACGGTAGCCCTGCGTCCCAAGACCGGGT  
CTCAAGACCAGGAAGTCCATAGGACTGTCTTCATGCGCTTGAACATCATCAGCCCTGACCTGTCTGGTTGCACAA  
GCAAAGGCCTCGTCTGCCCCGCGTGTGTTGGGCATCACCTTGGTGCCCTTCTCATCGGGGCCCCTGCTCACTGCTG  
CACTCTGGTACATCTACTCGCACACGCGTGAGTACCCAGGCCCCCACAG**TGAG**CATGCCGGGCCCCCTCCATCCA  
CCCCGGGGGAGCCCAGTGAAGCCTCTGAGGGATTGAGGGGGCCTGGCAGGACCCTGACCTCCGCCCCCTGCCCCCGC  
TCCCCGTCCCAGGTTCCCCCAGCAAGCGGGAGCCCGTGGTGGCGGTGGCTGCCCCGGCCTCCTCGGAGAGCAGCA  
GCACCAACCACAGCATCGGGAGCACCCAGAGCACCCCTGCTCCACCAGCAGCATGGCATAGCCCCGGCCCCCGG  
CGCTCGCCAGCAGGAGAGACTGAGCAGCCGCCAGCTGGGAGCACTGGTGTGAACCTCACCTGGGAGCCAGTCTT  
CCACTCGACCCAGAATGGAGCCTGCTCTCCGCGCTACCCCTTCCGCGCTCCCTCTCAGAGGCCTGCTGCCAGTGC  
AGCCACTGGCTTGGAACACCTTGGGGTCCCTCCACCCACAGAACCTTCAACCCAGTGGGTCTGGGATATGGCTG  
CCCAGGAGACAGACCCTTGCCACGCTGTTGTAAAAACCAAGTCCCTGTCAATTTGAACCTGGATCCAGCACTGG  
TGAAGTGAAGTGGGCAGGAAGGGAGAAGTGAAGACAGATTAGGCCAGCCAGCCAGGCCAGGCCAACAGCACCTCCCCG  
CTGGGAAGAGAAGAGGGGCCAGCCAGAGCCACCTGGATCTATCCCTGCGGCCTCCACACCTGAACCTTGCCCTAAC  
TAACTGGCAGGGGAGACAGGAGCCTAGCGGAGCCAGCCTGGGAGCCAGAGGGTGGCAAGAAGTGGGGCGTTG  
GGAGCCTAGTCTCTGCCACATGGAGCCCCCTCTGCCGGTGGGCAGCCAGCAGAGGGGGAGTAGCCAAGCTGCTT  
GTCTGGGCCTGCCCTGTGTATTACCAACCAATAAATCAGACCATGAAACCTGAAAAAAAAAAAAA

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**FIGURE 375**

MDRGTLPLAVALLLASCSLSPTSLAETVHCDLQPVGPERGEVITYTTSQVSKGCVAQAPNAILEVHVLFLEFPTGP  
SQLELTLQASKQNGTWPREVLLVLSVNSSVFLHLQALGIPLHLAYNSSLVTFQEPPGVNTTELPSFPKTQILEWA  
AERGPITSAAELNDPQSILLRLGQAQGSLSFCMLEASQDMGRTLEWRPRTPALVRGCHLEGVAGHKEAHILRVLP  
GHSAGPRTVTVKVELSCAPGDLDVILILQGPPYVSWLIDANHNMQIWTTGEYSFKIFPEKNIRGFKLPDTPQGGLL  
GEARMLNASIVASFVELPLASIVSLHASSCGGRLQTSPAPIQTTPPKDTCSPELLMSLIQTKCADDAMTLVLKKE  
LVAHLKCTITGLTFWDPSCEAEDRGDKFVLRSAISSCGMQVSASMISNEAVVNILSSSSPQRKKVHCLNMDSLSF  
QLGLYLSPHFLQASNTIEPGQQSFVQVRVSPSVSEFLLQLDSCHLDLGPEGGTVELIQGRAAKGNCVSLLSPSPE  
GDPRFSFLLHFYTVPIPKTGTLSTVALRPKTGSQDQEVHRTVFMRLNIISPDLGCTSKGLVLPVAVLGITFGAF  
LIGALLTAALWYIYSHTREYPRPPQ

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**FIGURE 376**

TCGGAGGAGCCAGCCGAAATCCTGCCGCCCTGCCCGGGACGAGGAGGAGGAGGAGGAAGAGGGGATCGGAGCAGGGG  
CTGGAGGAGGAAGAAGAGGTGGATCCCCGGATCCAGGGAGAAGTGGAGAAGTTAAATCAGTCCACGGATGATATC  
AACAGACGGGAGACTGAAC TTGAGGATGCTCGTCAGAAGTTCCGCTCTGTTCTGGTTGAAGCAACGGTGAAACTG  
GATGAAC TGGTGAAGAAAATTGGCAAAGCTGTGGAAGACTCCAAGCCCTACTGGGAGGCACAGAGGTGCTCCGTGCCGCCAAGGAG  
CAGGCTCAGCTGGAAGCTCAGAAAGCCACGCAGGACTTCCAGAGGGCCACAGAGGTGCTCCGTGCCGCCAAGGAG  
ACCATCTCCCTGGCCGAGCAGCGGCTGCTGGAGGATGACAAGCGGCAGTTCGACTCCGCTGGCAGGAGATGCTG  
AATCACGCCACTCAGAGGGTCATGGAGGCGGAGCAGACCAAGACCAGGAGCGAGCTGGTGCATAAGGAGACGGCA  
GCCAGGTACAATGCCGCCATGGGCCGCATGCGACAGCTGGAGAAGAACTCAAGAGAGCCATCAACAAGTCCAAG  
CCTTATTTTGAAC TCAAGGCAAAGTACTATGTGCAGCTCGAGCAACTGAAAAAGACTGTGGATGACCTGCAGGCC  
AAACTGACCCTGGCAAAGGCGAGTACAAGATGGCCCTGAAGAACCTGGAGATGATCTCAGATGAGATCCACGAG  
CGGCCGGCGCTCCAGTGCCATGGGGCCTCGGGGATGCGGTGTTGGTGTCTGAGGGCAGCAGCACATCTGTGGAGGAT  
CTGCCAGGGAGCAAACCTGAGCCTGATGCCATTTCTGTGGCCTCGGAGGCCTTTGAAGATGACAGCTGTAGCAAC  
TTTGTGTCTGAAGATGACTCGGAAACCCAGTCCGTGTCCAGCTTTAGTTTCAGGACCAACAAGCCCGTCTGAGATG  
CCTGACCAGTTCCCTGCGGTTGTGAGGCCTGGCAGCCTGGATCTGCCAGCCCTGTGTCCCTGTCTCAGATTTTGGG  
ATGATGTTCCAGTGTTGGGCCCTCGAAGTGAATGCAGCGGGGCCTCCTCCCCTGAATGTGAAGTAGAACGAGGA  
GACAGGGCAGAAGGGGCAGAGAATAAAACAAGTGACAAAGCCAACAACAACCGGGGCCTCAGCAGTAGCAGTGGC  
AGTGGTGGCAGCAGTAAGAGCCAAAGCAGCACCTCCCCTGAGGGCCAGGCCTTGAGAGAACCGGATGAAGCAGCTC  
TCCCTACAGTGCTCAAAGGGAAGAGATGGAATTATTGCTGACATAAAAAATGGTGCAGATTGGCTTGATTCATCCTG  
GGCCCTGGCCGATGTGCATATCAACATTTATACATGGAAC TGGAGAACATTGTGCCAATAATCATTTAATATATG  
CCAAATCTTACACGTCTACTCTAAACTGCTCTAATGAAGTTTCAGTGACCTTGAGGGCTAAAGATTGTTCTTCTG  
GGTAAGAGCTCTTGGGCTGGTTTTTTCAGAGCAGAGTTCTTGTGTGGGTAGACTGTGACTAGGTTACAGCCTTT  
GTGGAACATTCCGTATAACGGCATTGTGGAAGCAATAACTAGTTCCTATGAAAGAACCAGAGCTGGGAAGATGGC  
TGGGAAGCCAGGCCAAAGTGGGGCAACAGCTTGCTTCTCTTTCTCTCACCCCTCAGTTTGTATGGGAAAATG  
GAGATGTCTCTCCACTTTATCCCACGATATCTAAATGAAAAAGAAAGAAAACCCACACACAAAGCAAAAAC TCA  
AGTATTAAGAGCACATATTTTTGACCCAGTGGAGGCTTAAAAAAAAAAAAATCCAAGAACACAATTCATTTTCAC  
CACCTCTGGTGTTCAGAGGGGGCTTTTAAAAAAGCGTGATGCTGGGATACCCATTAAAAACCATTTTCTAGAAGG  
CTACCATGAGCTGCACTTTTTGGGGTGGGAAAGGTGAATGCCAGTGGGGATGCGGGGGGATGAGGGTAGGAGGGA  
CTTATAGAAGGGGATTTGTGGCTGTGGGGGAGAAGGTTCTACAGCATAAGCCTTATCCTGCCAGCCAAGGGGATT  
TATTC TAAGAGAAGTGCATGTGAAGAATGGTTGCCACTGTTATTAGATTGACAAGATGTTAATTTCTCTGTAGGT  
TGTAAC TTTAAAAATAAATGAAATTATTTAAGGGTTATGCTGCACTAGTATTCTTAGAGGAAACAGTTCTTTAA  
AGTTAGGAAAGGGAGTAGGCAGGCATGTGTTGGCAAAGGCTGTTAATAGTAGTTAAGTGTTAAGACTGCTTTTCT  
TTAACGTTTTTCATGGTAATGCATATTTAGAGCACTGTATTTTTGTCTTGTTAAGAAAATTTAGCATTCTCTTAAAG  
AAAAAAGCAACCCTCTTTCAAAC TGTTAATTCTGTCAAGCCTGTATATTTTAGTCATTTGTAAATCTCTTCATA  
CAATAGTGACTTCTTTTTTGA CTGATACAGTATCTTAATTACAAGGTTATTTGTACTTGTCTTAATACACTAAG  
TGTAATAAAAAACGGCTTGAG

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**FIGURE 377**

MEQGLEEEEEVDPRIQGELEKLNQSTDDINRRETELEDARQKFRSVLVEATVKLDELVKKIGKAVEDSKPYWEAR  
RVARQAQLEAQKATQDFQRATEVLRAAKETISLAEQRLLEDDKRQFDSAWQEMLNHATQRVMEAEQTKRSELVH  
KETAARYNAAMGRMRQLEKKLKRAINKSKPYFELKAKYYVQLEQLKKTVDLQAKLTLAKGEYKMALKNLEMISD  
EIHERRRSSAMGPRGCGVGAEGSSTSVEDLPGSKPEPDAISVASEAFEDDSCSNFVSEDDSETQSVSSFSSGPTS  
PSEMPDQFFPAVVRPGSLDLPSVSLSEFGMMFPVLGPRSECSGASSPECEVERGDRAEGAENKTSKANNNRGLS  
SSSGSGSSKSQSSTSPEGQALENRMKQLSLQCSKGRDGIADIKMVQIG



[illegible]

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**FIGURE 379**

MAEALGVSVIDYTFEDCQLALAEGLRLPADTCLLEFARLVRGLGLKPEKLEKDLDRYSERARMKGGEKIGIAEF  
AASLEVPVSDLLEDMFSLFDESGSGEVDLRECVVALSVVCRPARTLDTIQLAFKMYGAQEDGSGEGDLSCILKT  
ALGVAELTVTDLFRAIDQEEKGKITFADFHRFAEMYPAFAEEYLYPDQTHFESCAETSPAPIPNGFCADFSPENS  
DAGRKPVRKKLD

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**FIGURE 380**

GGCACGAGGCCGGATCCACCGTGCCTCTGCGGCCTGCGTGCCCGGAGTCCCCGCCTGTGTCTCTGTGCGCCGT  
CCCCGTCTCCTGCCAGGCGCGGAGCCCTGCGAGCCGCGGGTGGGCCCCAGGCGCGCAGACATGGGCTGCTCCGCC  
AAAGCGCGCTGGGCTGCCGGGGCGCTGGGCGTCGCGGGGCTACTGTGCGCTGTGCTGGGCGCTGTCATGATCGTG  
ATGGTGCCGTGCGTCAAGCAGCAGGTCCCTTAAGAAGCTGCGCATCGACCCCAGTAGCCTGTCTTCAACATG  
TGGAAGGAGATCCCTATCCCTTCTATCTCTCCGTCTACTTCTTTGACGTCATGAACCCCAGCGAGATCCTGAAG  
GGCGAGAAGCCGCAGGTGCGGGAGCGCGGGCCCTACGTGTACAGGGAGTTCAGGCACAAAAGCAACATCACCTTC  
AACAACAACGACACCGTGTCTTCTCGAGTACCGCACCTTCCAGTTCCAGCCCTCCAAGTCCCACGGCTCGGAG  
AGCGACTACATCGTCATGCCCAACATCCTGGTCTTGGGTGCGGCGGTGATGATGGAGAATAAGCCCATGACCCTG  
AAGCTCATCATGACCTTGGCATTACACCCCTCGGCGAACGTGCCTTCATGAACCGCACTGTGGGTGAGATCATG  
TGGGGCTACAAGGACCCCTTGTGAATCTCATCAACAAGTACTTTCCAGGCATGTTCCCTTCAAGGACAAGTTC  
GGATTATTTGCTGAGCTCAACAACCTCCGACTCTGGGCTCTTCACGGTGTTCACGGGGGTCCAGAACATCAGCAGG  
ATCCACCTCGTGGACAAGTGAACGGGCTGAGCAAGGTTGACTTCTGGCATTCCGATCAGTGCAACATGATCAAT  
GGAACCTCTGGGCAAATGTGGCCGCCCTTCATGACTCCTGAGTCTCGCTGGAGTTCTACAGCCCGGAGGCCCTGC  
CGATCCATGAAGCTAATGTACAAGGAGTCAGGGGTGTTTGAAGGCATCCCCACCTATCGCTTCGTGGCTCCCCAA  
ACCTGTCTTGGCAAACGGGTCCATCTACCCACCCAACGAAGGCTTCTGCCCGTGCCTGGAGTCTGGAATTCAGAAC  
GTCAGCACCTGCAGGTTCAAGTCCCCCTTGTTTCTCTCCCATCCTCACTTCTCAACGCCGACCCGGTTCTGGCA  
GAAGCGGTGACTGGCCTGCACCCTAACCAGGAGGCACACTCCTTGTTCTGGACATCCACCCGGTCACGGGAATC  
CCCATGAACCTGCTCTGTGAAACTGCAGCTGAGCCTCTACATGAAATCTGTGCGCAGGCATTGGACAAACTGGGAAG  
ATTGAGCCTGTGGTCCTGCCGCTGCTCTGGTTTGCAGAGAGCGGGGCCATGGAGGGGGAGACTCTTCACACATTC  
TACACTCAGCTGGTGTGATGCCAAGGTGATGCACTATGCCCAGTACGTCCTCCTGGCGCTGGGCTGCGTCTCTG  
CTGCTGGTCCCTGTCTGCTGCAAATCCGGAGCCAAGTAGGTGCTGGCCAGAGGGCAGCCCGGGCTGACAGCCAT  
TCGCTTGCTGCTGCTGGGGGAAAGGGGCTCAGATCGGACCCCTCTGGCCAACCGCAGCCTGGAGCCCACCTCCAGCA  
GCAGTCCTGCGTCTCTGCCGAGTGGGAGCGGTCACTGCTGGGGGCTGCGCAGCACGCTTGCGTCTTTTGCATGC  
CGCGTTGCCACTACTCTGCCTGTTCTGGAAGGCCTGGGACCCCTCCCTTGAGGGGGGCACAGGGTCCCTGAGGACAC  
CGTGAGCCAGCCAGGCCTGGCCGCTGGGCTGACCGGCCCCCAGCCCTACACCCGCTTCTCCCGGACTCTCC  
CAGCGGACAGCCCCCAGCCCCACAGCCTGAGCCTCCAGCTGCCATGTGCCTGTTGCACACCTGCACACACGCC  
CTGGCACACATACACATGCGTGCAGGCTTGTGCAGACACTCAGGGATGGAGCTGCTGCTGAAGGGACTTGTAG  
GGAGAGGCTCGTCAACAAGCACTGTTCTGGAACCTTCTCTCCACGTGGCCACAGGCCTGACCACAGGGGCTGTG  
GGTCTGCGTCCCTTCTCGGGTGAGCCTGGCCTGTCCCGTTCAGCCGTTGGGCCCAGGCTTCCCTCCCTCCAA  
GGTGAAACACTGCAGTCCCGGTGTGGTGGCTCCCCATGCAGGACGGGCCAGGCTGGGAGTGCCGCTTCTGTGC  
CAAATTCAGTGGGGACTCAGTGCCCAGGCCCTGGCCACGAGCTTTGGCCTTGGTCTACCTGCCAGGCCAGGCAAA  
GCGCCTTTACACAGGCCTCGGAAAACAATGGAGTGAGCACAAGATGCCCTGTGCAGCTGCCCGAGGGTCTCCGCC  
CACCCCGGCCGGACTTTGATCCCCCGAAGTCTTACAGGCACTGCATCGGGTGTCTGGCGCCCTTTTCTCTCCA  
GCCTAAACTGACATCATCTATGGACTGAGCCGGCCACTCTCTGGCCGAAGTGGCCGCAGGCTGTGCCCCGAGC  
TGCCCCCACCCCTCACAGGTCCCTCAGATTATAGGTGCCAGGCTGAGGTGAAGAGGCCTGGGGGCCCTGCCT  
TCCGGGCGCTCCTGGACCCTGGGGCAAACCTGTGACCCCTTTTCTACTGGAATAGAAATGAGTTTTATCATCTTTG  
AAAAATAATTCACTCTTGAAGTAATAAACGTTTTAAAAAAAAAAAAAAAAAAAA

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**FIGURE 381**

MGCSAKARWAAGALGVAGLLCAVLGAVMIVMVP SLIKQQVLKNVRIDPSSLSFNMWKEIPIPFYLSVYFFDVMNP  
SEILKGEKPQVRERGPYVYREFRHKSNITFNNNDTVSFLEYRTFQFQPSKSHGSESDYIVMPNIIVLGAAVMMEN  
KPMTLKLIMTLAFTTLGERAFMNRTVGEIMWGYKDPLVNLINKYFPGMFPFKDKFGLFAELNNSDSGLFTVFTGV  
QNISRIHLVDKWNGLSKVDFWHSQCNMINGTSGQMWPFFMTPESSLEFYSPACRSMKLMYKESGVFEGIPTYR  
FVAPKTLFANGSIYPPNEGFCPCLESGIQNVSTCRFSAPLFLSHPHFLNADPVLAEAVTGLHPNQEAHSLFLDIH  
PVTGIPMNC SVKLQLSLYMKSVAGIGQTGKIEPVVLP LLWFAESGAMEGETLHTFYTQLVLMPKVMHYAQYVLLA  
LGCVLLLVVICQIRSQVGAGQRAARADSHSLACWKGASDRTLWPTAAWSPPPAAVLRRLCRSGSGHCWGLRSTL  
ASFACRVATTLPVLEGLGPSLGGGTGS

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**FIGURE 382**

AGTCAAGATGGAGGAGTACGCGGAGAGCCTTGCCCATGGCGAATTGTGGATGACTGTGGTGGGGCCTTTACGAT  
GGGTACCATTTGGTGGTGGTATCTTTCAAGCAATCAAAGGTTTTTCGCAATTCTCCAGTGGGAGTAAACCACAGACT  
ACGAGGGAGTTTGACAGCTATTAAAACCAGGGCTCCACAGTTAGGAGGTAGCTTTGCAGTTTGGGGAGGGCTGTT  
TTCCATGATTGACTGTAGTATGGTTCAAGTCAGAGGAAAGGAAGATCCCTGGAACCTCCATCACAAGTGGTGCCTT  
AACGGGAGCCATACTGGCAGCAAGAAATGGACCAGTGGCCATGGTTGGGTCAGCCGCAATGGGTGGCATTCTCCT  
AGCTTTAATTGAAGGAGCTGGTATCTTGTTGACAAGATTTGCCTCTGCACAGTTTCCCAATGGTCCTCAGTTTGC  
AGAAGACCCCTCCAGTTGCCTTCAACTCAGTTACCTTCCTCACCTTTTGGAGACTATCGACAATATCAGTAGGA  
CTTCTTTCCTAGGATTTCTTTAACAGAACGAGTTGTGGTTCGAGAAGGATTTCAGAAGATCAAGTTACAGTCTGT  
TTTTAAAACCATAGGTGGGACAGCTATGGCCAATAGGCTATAAAGAGACATTTAGCACTTTTTTCTATTTAAAGG  
AACAAGCGGGGAAGGGTGCTAAAAGATAATACGTTTATTTATTCACACTTGAATTGCATTTGTGATCAAAATAAA  
TGTTTAAATCGCTAAAGGAAAATACAGTAAGTGCTTGAAAGATGAAGGACCAAAGGCCAAAAAACAGTGAAATA  
TGATCATCATCTCTTGCGGACTTCTCTGCCTGGTTTTGTGTGTTCTGTTATTCAAACAATAAAAAAGCTGGTGGAA  
CTTACTCTTTCTTTTAAGATAAGTTGTAGACTTCGATGTTTCATGCTCATGTACTTCAAATAATGCATGTTTTAT  
AGTTAGTCCCTCATCACTTGAAGTGACTTCTGAGAATTATGCAGAGTCAACATGGATCATTTCACAGTGAGATGC  
TTTATGGATTGAAGGATATGGTAAAATGTTTATAGTTTACTTTGAAAGTAAAATATACTATGTCTTGGTTTTGAG  
GATATTGGATACAAAACCTCTCTTCTTTAGGGCTACTGAGTCTTGATTCTGATCATCAGAAATTTACCAGAAA  
CAACTTGCTTCCAATATACCCAATTCTATATGAAGAATTCATGGAGAGTGTACTGGCACTGGAAGAGTTTAGTGT  
TTCTTGATGCTTGAAAATAAAGTATGTACTGTTTTGAATGTGTTCCAAGTCCTCTGCATAAACGATGTATTTTG  
GGGTCIGGTTGGGCCTGAAAATGGATGAGCACTTCAGAACAGGTCATTTTCCTGATATTGGAAGTGACATGTGG  
CCCTATAGGAGGCATGATGTTAGTTAATTACACATTTGCCTACATCTGTGGGAAATGGAGAACAAAGCCATGTGG  
GTACTGTAAACACACGTTTATCTTTTGCCCCAATGCCATACATATGGTAGGCATTTAATTACTGATTGTGTTTGG  
ATAATTTGGGAATTTTCGACTGTGGTAAAATATACATAAAATAACTTATTAAAAA

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**FIGURE 383**

MEEYAREPCPWRIVDDCGGAFTMGTIGGGIFQAIKGFRNSPVGVNHRLRGSLTAIKTRAPQLGGSFAVWGGLFSM  
IDCSMVQVRGKEDPWNSITSGALTGAILAARNGPVAMVGSAAAMGGILLALIEGAGILLTRFASAQFPNGPQFAED  
PSQLPSTQLPSSPFGDYRQYQ

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**FIGURE 384**

ATGGCGACGGAGCAGAGGCCTTTCCACCTGGTGGTGTTCGGCGCGTCTGGCTTCACCGGCCAGTTCTGTGACCGAG  
GAGGTGGCCCGGGAGCAGGTGGACCCGGAGCGGACCCAGCCTGCCCTGGGCGTGGCGGGCCGCTCCCGGGAGAAG  
CTGCAGCGGGTGCTGGAGAAGGCGGCCCTGAAGCTGGGAAGACCAACACTGTCATCTGAAGTTGGAATCATCATC  
TGTGATATTGCTAATCCAGCCTCGCTTGATGAAATGGCTAAACAGGCAACAGTTGTCTCAATTGCGTAGGACCA  
TATCGGTTTTATGGAGAACCTGTAATAAAAGCATGTATTGAAAATGGAGCCAGTTGTATCGACATCAGTGGAGAA  
CCTCAGTTTTCTGGAACCTAATGCAACTGAAGTATCATGAGAAAGCTGCAGACAAAGGGGTTTATATCATTGGAAGC  
AGCGGCTTTGACTCCATTCCAGCAGATCTGGGAGTAATATATACCAGAAATAAAATGAATGGTACTTTGACTGCT  
GTGGAAAGTTTTCTGACTATACATTGAGGACCTGAGGGTTGAGCATTGATGTTACCTGGAAGTCAGCAATT  
TATGGTTTTGGAGATCAGAGTAATTTGAGAAAATAAGAAATGTATCAAATCTGAAACCTGTCCCGCTCATTGGT  
CCAAAATTGAAGAGAAGGTGGCCAATTTCTTATTGTGCGGAACTCAAAGGTTATTCCATTCTTTTTATGGGATCT  
GATGTGTCTGTTGTAAGGAGGACTCAACGTTACTTGTATGAAAATTTAGAGGAATCACCAGTTTCAATGCTGCG  
TATGTAAGTGTGGGAGGCATCACCTCTGTTATTAAGCTGATGTTTGAGGACTTTTTCTTTTTGTCTTTGTGAGG  
TTTGAATTGGAAGGCAACTTCTCATAAAATTCCCATGGTTCTTCTCTTTGGCTATTTTTCAAAAACAAGGCCCA  
ACACAAAACAGATTGATGCTGCCTCATTACGCTGACATTCTTTGGTCAAGGATACAGCCAAGGCACTGGTACA  
GATAAGAACAAACCAATATCAAAATTTGTACTCAGGTGAAAGGACCAGAGGCTGGCTATGTGGCTACCCCATATA  
GCTATGGTTTCAGGCAGCCATGACTCTTCTAAGTGATGCTTCTCATCTGCCTAAGGCGGGCGGGGTCTTCACACCT  
GGAGCAGCTTTTTCCAAAACAAAGTTGATTGACAGACTCAACAAACACGGTATTGAGTTTAGTGTTATTAGCAGC  
TCTGAAGTCTTAAACACTGGAAGAATTAAGTGAAGTCATAACGTGCGTGAATTAACAGCTTCTCTATTTGATATTT  
GAAATTTCTTCTGTAAGCCTGTCTGAGTGTATGTGGAAACGATTGTCAAATCTAAATATCTATATATTAAAAAGT  
AGGAAATTGTCCTAGCTTACCCTAAATTTCAAATCTGAGTTGATTTTGTGATTTTATTGCTTATAACAGAGAACT  
CATATTTGACATATTTTTTTTTCATTGATGTGTTCTGTTAGATTTTACGAATGAGCTGGCAGGTCTAATGGGGGA  
GGCGGCGTCCCAGTCTGTGTTGCAGCAGCATTCTCATCGGGGGTGCACACCATCGTTACTGTCGGGCAGTAAC  
TGCCGCTTGCCCTTGCCGAGTAGGAGGGAAATCTCACCTTCTTCCACATACTGTCTTGAGCCTTTGCTAAATTA  
AACTGCACTTTTTGCTGTTTTTGCCTAGTTTTTCGCCAATCTACACTGATTTTGGACTGTTACCTAAGTTGAAAA  
ATAAAAGGTTGTCAATCGAATGGTGGTTAATGTTGGACCTGCCGATGTATTTGTATAGTGGTAGAAACATGCTGC  
TTAAGTGGCCTAACCTGTTTCTTGCCAATAAGTAGGCTTATCATTTTTATTTTTACGTAATTCTATATCTGTGACT  
AGGTTTTTAAGGATACAGCTTATAAGTTGCTATCAATTTTCACTACCTAAGCAGAATTTTTCTCTAATTTACTTT  
TTGTATTTTAAGTGGTTTTACATGGAAGCCCTAAAATAAGGCAAAAGACTTTTTCTTTTGTAAATAAGCATATAA  
TAAACACGTATATACATAGCAAATTGA

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**FIGURE 385**

MATEQRPFHLVVF GASGFTGQFVTEEVAREQVDPERTQPALGVAGRSREKLQRVLEKAALKLGRPTLSSEVGII I  
CDIANPASLDEMAKQATVVLNCGPYRFYGEPIKACIENGASCIDISGEPQFLELMQLKYHEKAADKGVYIIGS  
SGFDSIPADLGVYTRNKMNGTLTAVESFLTIHSGPEGLSIHDGTWKSAYGFGDQSNLRKLRNVSNLKPVPLIG  
PKLKRRWPISYCRELKGYSIPFMGSDVSVVRRTQRYLYENLEESPVQYAAVTVGGITSVIKLMFAGLFFLFFVR  
FGIGRQLLIKFPWFFSFGYFSKQGPTQKQIDAASFLLTFFGQYSQGTGTDKNKPNIKICTQVKGPEAGYVATPI  
AMVQAAMTLLSDASHLPKAGGVFTPGAASFSTKLIDRLNKHGIEFSVISSEV



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**FIGURE 386**

CTCAAACACCGCCTGCTAAAAATACCCGACTGGAGGAGCATAAAAGCGCAGCCGAGCCCAGCGCCCCGCACTTTT  
CTGAGCAGACGTCCAGAGCAGAGTCAGCCAGCATGACCGAGCGCCGCGTCCCCTTCTCGCTCCTGCGGGGCCCCA  
GCTGGGACCCCTTCCGCGACTGGTACCCGCATAGCCGCCTCTTCGACCAGGCCTTCGGGCTGCCCCGGCTGCCGG  
AGGAGTGGTCGCAGTGGTTAGGCGGCAGCAGCTGGCCAGGCTACGTGCGCCCCCTGCCCCCGCCGCCATCGAGA  
GCCCCGCAGTGGCCGCGCCCGCCTACAGCCGCGCGCTCAGCCGGCAACTCAGCAGCGGGGTCTCGGAGATCCGGC  
ACACTGCGGACCGCTGGCGCGTGTCCCTGGATGTCAACCACTTCGCCCCGGACGAGCTGACGGTCAAGACCAAGG  
ATGGCGTGGTGGAGATCACCGCAAGCACGAGGAGCGGCAGGACGAGCATGGCTACATCTCCCGGTGCTTCACGC  
GGAAATACACGCTGCCCCCGGTGTGGACCCACCCAAGTTTCCTCCTCCCTGTCCCTGAGGGCACACTGACCG  
TGGAGGCCCCCATGCCCAAGCTAGCCACGCAGTCCAACGAGATCACCATCCAGTCACCTTCGAGTCGCGGGGCC  
AGCTTGGGGGCCCAGAAGCTGCAAAATCCGATGAGACTGCCGCCAAGTAAAGCCTTAGCCTGGATGCCACCCCT  
GCTGCCGCCACTGGCTGTGCCTCCCCCGCCACCTGTGTGTTCTTTTGATACATTTATCTTCTGTTTTTCTCAAAT  
AAAGTTCAAAGCAACCACCTGTAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 387**

MTERRVPFSLLRGPSWDPFRDWYPHSRLFDQAFGLERLPEEWSQWLGGSSWPGYVRPLPPAAIESPAVAAPAYSR  
ALSRQLSSGVSEIRHTADRWRVSLDVNHFADELTVKTKDGVVEITGKHEERQDEHGYISRCFTRKYTLPPGVDP  
TQVSSSLSPGTLTVEAPMPKLATQSNEITIPVTFESRAQLGGPEAAKSDETAAK

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**FIGURE 388**

ACTGCGACTCGAGACAGCGGCCCGGCAGGACAGCTCCAGAAATGAAAATGCGGTTCTTGGGGTTGGTGGTCTGTTT  
GGTTCTCTGGCCCCTGCATTCTGAGGGGTCTGGAGGGAACTGACAGCTGTGGATCCTGAAACAAACATGAATGT  
GAGTGAAATTATCTCTTACTGGGGATTCCCTAGTGAGGAATACCTAGTTGAGACAGAAGATGGATATATTCTGTG  
CCTTAACCGAATTCTCATGGGAGGAAGAACCATTCTGACAAAAGGTCCCAAACAGTTGTCTTCCTGCAACATGG  
CTTGCTGGCAGATTCTAGTAACTGGGTACAAAACCTTGCCAACAGCAGCCTGGGCTTCATTCTTGCTGATGCTGG  
TTTTGACGTGTGGATGGGCAACAGCAGAGGAAATACCTGGTCTCGGAAACATAAGACACTCTCAGTTTCTCAGGA  
TGAATTCTGGGCTTTTCAGTTATGATGAGATGGCAAAATATGACCTACCAGCTTCATTAACTTCATTCTGAATAA  
AACTGGCCAAGAACAAGTGTATTATGTGGGTCAATTCTCAAGGCACCCTATAGGTTTTATAGCATTTTTCACAGAT  
CCCTGAGCTGGCTAAAAGGATTAAAATGTTTTTTGCCCTGGGTCTGTGGCTTCCGTGCGCTTCTGTACTAGCCC  
TATGGCCAAATTAGGACGATTACCAGATCATCTCATTAAAGGACTTATTTGGAGACAAAGAATTTCTTCCCCAGAG  
TGCGTTTTTTGAAGTGGCTGGGTACCCACGTTTGCACTCATGTCATACTGAAGGAGCTCTGTGGAAATCTCTGTTT  
TCTTCTGTGTGGATTTAATGAGAGAAATTTAAATATGTCTAGAGTGGATGTATATACAACACATTCTCCTGCTGG  
AACTTCTGTGCAAAACATGTTACACTGGAGCCAGGCTGTTAAATTCCAAAAGTTTCAAGCCTTTGACTGGGGAAG  
CAGTGCCAAGAATTATTTTTCATTACAACCAGAGTTATCCTCCACATACAATGTGAAGGACATGCTTGTGCCGAC  
TGCAGTCTGGAGCGGGGGTACGACTGGCTTGACAGATGTCTACGACGTCAATATCTTACTGACTCAGATCACCAA  
CTTGGTGTTCATGAGAGCATTCCGGAATGGGAGCATCTTGACTTCATTGTTGGGGCTGGATGCCCCCTGGAGGCT  
TTATAATAAAATTATTAATCTAATGAGGAAATATCAGTGAAAAGCTGGACTTGAGCTGTGTACCACCAAGTCAATG  
ATTATGTCATGTGAAATGTGTTTGCTTCATTTCTGTAAACACTTGTTTTTCTTTCCAGGTCTTTTGTTTTTT  
TATATCCAAGAAAATGATAACTTTGAAGATGCCAGTTCACCTAGTTTCAATTAGAAACATACTAGCTATTTTT  
TCTTTAATTAGGGCTGGAATAGGAAGCCAGTGTCTCAACCATAGTATTGTCTCTTTAAGTCTTTTAAATATCACT  
GATGTGTA AAAAGGTCATTATATCCATTCTGTTTTTAAAAATTTAAATATATTGACTTTTTGCCCTTCATAGGAC  
AAAGTAATATATGTGTTGGAATTTTAAATTTGTGTTGTCAATTGGTAAATCTGTCACTGACTTAAGCGAGGTATAA  
AAGTACGCAGTTTTTCATGTCCTTGCCTTAAAGAGCTCTCTAGTCTAACGGTCTTGTAGTTAGAGATCTAAATGAC  
ATTTTATCATGTTTTCTGCAGCAGGTGCATAGTCAAATCCAGAAATATCACAGCTGTGCCAGTAATAAGGATGC  
TAACAATTAATTTTATCAAACCTAACTGTGACAGCTGTGATTTGACACGTTTTAATTGCTCAGGTAAATGAAAT  
AGTTTTCCGGCGTCTTCAAAAACAAATTGCACTGATAAAAACAAAACAAAAGTATGTTTTAAATGCTTTGAAGAC  
TGATACACTCAACCATCTATATTCATGAGCTCTCAATTTTCATGGCAGGCCATAGTTCTACTTATCTGAGAAGCAA  
ATCCCTGTGGAGACTATACCACTATTTTTTCTGAGATTAATGTACTCTTGAGGCCGCTACTGTGCTTATTGATC  
ACATCTGTGTGAAGCCAAAGCCCCGTGGTTGCCCATGAGAAAGTGCTTGTTCATTTTCACCCAAATGAAGTGTG  
AACGTGATGTTTTCGGATGCAAACTCAGCTCAGGGATTCATTTTGTTGCTTAGTTTTATATGCATCCTTATTTTT  
AATACACCTGCTTCACGTCCCTATGTTGGGAAGTCCATATTTGTCTGCTTTTCTTGAGCATCATTTTCTTACAA  
TACTGTCCGGTGGACAAAATGACAATTGATATGTTTTTCTGATATAATTACTTTAGCTGCTAACAGTACAATG  
CTTGTTAATGGTTAATATAGGCAGGGCGAATACTACTTTGTAACCTTTTAAAGTCTTAACTTTTCAATAAAATTG  
AGTGAGACTTATAGGCC

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**FIGURE 389**

MKMRFLGLVVCLVLWPLHSEGGKLTAVDPETNMNVSEIISYWGFPSEEYLVETEDGYILCLNRIPHGRKNHSD  
KGPKPVVFLQHGLLADSSNWVTNLANSGLFILADAGFDVWMGNSRGNTWSRKHKTLVSQSDEFWAFSYDEMAKY  
DLPASINFILNKTGQEQVYYVGHSQGTIGFIAFSQIPELAKRIKMFFALGPVASVAFCTSPMAKLGRLPDHLIK  
DLFGDKEFLPQSAFLKWLGTHVCTHVILKELCGNLCFLLCGFNERNLNMSRVDVYTTTHSPAGTSVQNMHLHWSQAV  
KFQKFQAFDWGSSAKNYFHYNQSYPTYNVKDMLVPTAVWSGGHDWLADVYDVNILLTQITNLV FHESIPEWEHL  
DFIWGLDAPWRLYNKIINLMRKYQ

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**FIGURE 390**

CGCAGGCTGGAAGGAAGACGAACCTACGAAGCAGAGATCTGAAGACAGC**ATGT**ACACAGCCATTCCCCAGAGTGG  
CTCTCCATTCCCAGGCTCAGTGCAGGATCCAGGCCTGCATGTGTGGCGGGTGGAGAAGCTGAAGCCGGTGCCTGT  
GGCGCAAGAGAACCAGGGCGTCTTCTTCTCGGGGGACTCCTACCTAGTGCTGCACAATGGCCCAGAAGAGGTTTC  
CCATCTGCACCTGTGGATAGGCCAGCAGTCATCCCGGGATGAGCAGGGGGCCTGTGCCGTGCTGGCTGTGCACCT  
CAACACGCTGCTGGGAGAGCGGCCTGTGCAGCACCGCGAGGTGCAGGGCAATGAGTCTGACCTCTTCATGAGCTA  
CTTCCCACGGGGCCTCAAGTACCAGGAAGGTGGTGTGGAGTCAGCATTTACAAGACCTCCACAGGAGCCCCAGC  
TGCCATCAAGAACTCTACCAGGTGAAGGGGAAGAAGAACATCCGTGCCACCGAGCGGGCACTGAACTGGGACAG  
CTTCAACACTGGGGACTGCTTCATCCTGGACCTGGGCCAGAACATCTTCGCCTGGTGTGGTGGAAAGTCCAACAT  
CCTGGAACGCAACAAGGCGAGGGACCTGGCCCTGGCCATCCGGGACAGTGAGCGACAGGGCAAGGCCCAGGTGGA  
GATTGTCACTGATGGGGAGGAGCCTGCTGAGATGATCCAGGTCCTGGGCCCCAAGCCTGCTCTGAAGGAGGGCAA  
CCCTGAGGAAGACCTCACAGCTGACAAGGCAAATGCCCAGGCCGCAGCTCTGTATAAGGTCTCTGATGCCACTGG  
ACAGATGAACCTGACCAAGGTGGCTGACTCCAGCCCCCTTTGCCCTTGAAGTCTGATATCTGATGACTGCTTTGT  
GCTGGACAACGGGCTCTGTGGCAAGATCTATATCTGGAAGGGGCGAAAAGCGAATGAGAAGGAGCGGCAGGCAGC  
CCTGCAGGTGGCCGAGGGCTTCATCTCGCGCATGCAGTACGCCCCGAACACTCAGGTGGAGATTCTGCCTCAGGG  
CCGTGAGAGTCCCATCTTCAAGCAATTTTTCAAGGACTGGAA**TGA**GGGTGGGCGTCTTCTGCCCCATGCTCCC  
CTGCCCCCACCACCTGCCTGCTTGCTTCTCTGGCTGCCTGGTCAGTGCAGAGGTGCCCCCTGCAGATGTTCAAT  
AAAGGAGACAAGTGCTTTCCC

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**FIGURE 391**

MYTAIPQSGSPFPGSVQDPGLHVVRVEKLPVPVAQENQGVFFSGDSYLVLHNGPEEVSHLHLWIGQQSSRDEQG  
ACAVLAVHLNNTLLGERPVQHREVQGNESDLFMSYFPRGLKYQEGGVESAFHKTSTGAPAAIKKLYQVKGKKNIRA  
TERALNWDSFNTGDCFILDGQNIFAWCGGKSNILERNKARDLALAIRDSERQGKAQVEIVTDGEEPAEMIQVLG  
PKPALKEGNPEEDLTADKANAAALYKVSDATGQMNLTQVADSSPFALELLISDDCFVLDNGLCGKIYIWKGRK  
ANEKERQAALQVAEGFISRMQYAPNTQVEILPQGRESPIFKQFFKDWK

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**FIGURE 392**

CCGGTCCTGAGACACGCTGTGTGGCTGAAAAGTGAAGGCAAGAGCTCATTGGCCCTCTGTGCTCCCCCTCCGCAAG  
GGATCGTTTTCTCCAGAAGAGCTGGATATTCTTTGCCCCAGTTATGGCAGACAAGTTAACGAGAATTGCTATTGTC  
AACCATGACAAATGTAAACCTAAGAAATGTGACAGGAATGCAAAAAGAGTTGTCCTGTAGTTTCGAATGGGAAAA  
TTATGCATAGAGGTTACACCCAGAGCAAAAATAGCATGGATTTCCGAAACTCTTTGTATTGGTTGTGGTATCTGT  
ATTAAGAAATGCCCCTTTGGCGCCTTATCAATTGTCAATCTACCAAGCAACTTGGAAAAAGAAACCACACATCGA  
TATTGTGCCAATGCCTTCAAACCTTACAGGTTGCCTATCCCTCGTCCAGGTGAAGTTTTGGGATTAGTTGGAAC  
AATGGTATTGGAAGTCAGCTGCTTTAAAAATTTTAGCAGGAAAAACAAAGCCAAACCTTGGAAAGTACGAATGAT  
CCTCTGACTGGCAGGAGATTTTGACTIONTTCCGTGGATCTGAATTACAAAATTACTTTACAAAGATTCTAGAA  
GATGACCTAAAAGCCATCATCAAACCTCAATATGTAGCCAGATTCCTAAGGCTGGCAAAGGGGACAGTGGGATCT  
ATTTTGGACCGAAAAGATGAAACAAAGACACAGGCAATTGTATGTCAGCAGCTTGATTTAACCACCTAAAAGAA  
CGAAATGTTGAAGATCTTTCAGGAGGAGAGTTGCAGAGATTGCTTGTGCTGTGCTTTGCATACAGAAAGCTGAT  
ATTTTCATGTTTGATGAGCCTTCTAGTTACCTAGATGTCAAGCAGCGTTTAAAGGCTGCTATTACTATACGATCT  
CTAATAAATCCAGATAGATATATCATTGTGGTGGAACATGATCTAAGTGTATTAGACTATCTCTCCGACTTCATC  
TGCTGTTTTATATGGTGTACCAAGCGCCTATGGAGTTGTCACTATGCCTTTTAGTGTAAGAGAAGGCATAAACATT  
TTTTTGGATGGCTATGTTCCAACAGAAAACCTTGAGATTGAGAGATGCATCACTTGTTTTTAAAGTGGCTGAGACA  
GCAAATGAAGAAGAAGTTAAAAAGATGTGTATGTATAAATATCCAGGAATGAAGAAAAAATGGGAGAATTTGAG  
CTAGCAATTGTAGCTGGAGAGTTTACAGATTCTGAAATTATGGTGTATGCTGGGGGAAAATGGAACGGGTAAACG  
ACATTTATCAGAATGCTTGCTGGAAGACTTAAACCTGATGAAGGAGGAGAAGTACCAGTTCTAAATGTCAGTTAT  
AAGCCACAGAAAATTAGTCCCAAATCAACTGGAAGTGTTCGCCAGTTACTACATGAAAAGATAAGAGATGCTTAT  
ACTCACCCACAATTTGTGACCGATGTAATGAAGCCTCTGCAAATTGAAAACATCATTGATCAAGAGGTGCAGACA  
TTATCTGGTGGTGAACCTACAGCGAGTACGTTTACGCCCTTGGCTTGGGCAAACCTGCTGATGTCTATTTAATTGAT  
GAACCATCTGCATATTTGGATTCTGAGCAAAGACTGATGGCAGCTCGAGTTGTCAAACGTTTCATACTCCATGCA  
AAAAAGACAGCCTTTGTTGTGGAACATGACTTCATCATGGCCACCTATCTAGCGGATCGCGTCATCGTTTTTGTAT  
GGTGTTCATCTAAGAACACAGTTGCAAACAGTCTCAAACCTTTTGGCTGGCATGAATAAATTTTTGTCTCAG  
CTTGAAATTACATTGAGAAGAGATCCAAACAACCTATAGGCCACGAATAAACAAACCTTAATTCAATTAAGGATGTA  
GAACAAAAGAAGAGTGGAACTACTTTTTCTTGATGATTAGACTGACTCTGAGAATATTGATAAGCCATTTATT  
AAAAGGAGTATTTACTAGAATTTTTTGTATATAAACTTGAATCAGGATTTTATGCCCCACATACTCTGGAAC  
TGAAGTATAATATACTTAATATAACATAAAAAAGCCAGTTGGGTCTAAATTGTAGTTGAAACACAGAAAATGCCA  
CTTTCTGTTTCTGAAGAGGCTCTTTTGTGCATAATATTCTAAATGAAGACATTTCAAGCTATACAAATTACTT  
CCAAGTTTTTCATGATGTATGGGAAGATTTTCAGTAGGTGTATTATATTACGGTACCAAATGCTGACCAGTGTTG  
CTCCATTTTTTAAATCTTGAAAAGGGTTTCTGTACTTACCTGGTTTGGCAAAGTATGCCAGTGTAATGAACTGCC  
CTTATTTTTAAAGCCAGTCAAAGATTCCACTGATTGACATTTGATAAATAAACATCAGGATTATGTTTATTGTTT  
GTTTTCAGTCTTGTCACTATATTACCAGTATATGGTTTCCGAGGAAGATTATCTACTGCAAAACACCACTGTTGG  
AAAAATAGGTATTTTTTAAATTGTTTTTAAATCCTTTTTTGGTGCCTTTTAAACATGTTTAAAGCAAAAACCAATTGAG  
TCCATTCCCCGCAAAAACCCCTAACTTTACTCTGAACCTTTTTTTGTTTTTGCATTCCATGAGGTTCTGTATTCA  
GTCATTCTCTAGGTAATGTCAATTTTTGTACACATATATTTATATAATCACTGATTGAGATTTAGGAAAAAGCATT  
TCTAAAGAATATTTGCTTCCCTTAGAACTACAGACTCGAAATCTTTAAAGATGGTGCCTAAGCATCTATGTATTT  
TTTTTAAAGTTCCACAGATTTTTCTGTTGGGCAGGCCAAGGATTATAAACCACTTCCCTAAAGGCAACATTAATGC  
AAAAGTCCCCAGATGGCAATACAAAGTATCCCTGGTACCACATATATTCAATTTGTGAGTTTGGATATAGAGCAC  
ATTATCTAAACCATTTTGTAGTTCCAAAACCCATCTAAATTTCTTGAGTTCTGAATTTTGAACAGGATTACCT  
GGAGCCTGGAGCCACTTTAAGTTGTACTTCTGACTAACTGGAATTATGAGTGAGGAAGAGTGTTTACTAAATAA  
ATGACTGGGGCAAGCAAAATTGAGGAGGAAATTAGAACTGTTTGACAAACTTTAAGAGCTACTTGAAATAACAG  
AAGTCTTGATTAATATGCAATAATGGCTAGAAAGTATGGTTTAACTGGACCCTATTATGCCTTTTAAAAATAAT  
TTCAGTAACCCATAAATACATGTTGTAAAAAATTCAAATATACAGAATGGAATAAAAAAATGATCTCCCTTTATT  
ACCCCTCCAAAGGTTACCAGCGTTTGAATTTAATAATGTATATTCTTTCATGCTTTTTTCTGTGCACTTACCTAA  
GTGTGAATATGTAAAGGGTTTGTGTGTATACAAATGGGATTATACTAAAATAAGTAATGCCTATTTTTTAAAGGAT  
AGGTTAAATTTGTGAATGATCATTTCAAATATATTGAATAAAATAAGCAAAAGCTATTGTTATTTACTGATCCTG  
AA

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**FIGURE 393**

MADKLTRIAIVNHDKCKPKKCRQECKKSCPVVRMGKLCIEVTPQSKIAWISSETLCIGCGICIKKCPFGALSIVNL  
PSNLEKETTHRYCANAFKLHRLPIPRPGEVLGLVGTNGIGKSAALKILAGKQKPNLGKYDDPPDWQEILTYFRGS  
ELQNYFTKILEDDLKAIKPYVARFLRLAKGTVGSILDRKDETKTQAIVCQQLDLTHLKERNVEDLSGGELQRF  
ACAVVCIQKADIFMFDEPSSYLDVKQRLKAAITIRSLINPDRIIVVEHDLVLDYLSDFICCLYGVP SAYGVVT  
MPFSVREGINIFLDGYVPTENLRFRDASLVFKVAETANEVKKMCMYKYPGMKKKMGEFELAIVAGEFTDSEIM  
VMLGENGTGKTTFIRMLAGRLKPDEGGEVPVLNVSYKPQKISPKSTGSRQLLHEKIRDAYTHPQFVTDVMKPLQ  
IENIIDQEVQTLSSGGELQRVRLRLCLGKPADVYLIDEPSAYLDSEQRLMAARVVKRFILHAKKTAFVVEHDFIMA  
TYLADRVIVFDGVPSKNTVANSPTLLAGMNKFLSQLEITFRDPNNYRPRINKLNSIKDVEQKSGNYFFLDD



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**FIGURE 394**

AGAGCGATCATGTCGCACAAACAAATTTACTATTTCGGACAAATACGACGACGAGGAGTTTGAGTATCGACATGTC  
ATGCTGCCCCAAGGACATAGCCAAGCTGGTCCCTAAAACCCATCTGATGTCTGAATCTGAATGGAGGAATCTTGGC  
GTTTCAGCAGAGTCAGGGATGGGTCCATTATATGATCCATGAACCAGAACCTCACATCTTGCTGTTCCGGCGCCCA  
CTACCCAAGAAACCAAAGAAATTGAAGCTGGCAAGCTACTTTTCAGCCTCAAGCTTTACACAGCTGTCCTTACTTC  
CTAACATCTTTCTGATAACATTATTATGTTGCCTTCTTGTTTCTCACTTTGATATTTAAAAGATGTTCAATACAC  
TGTTTGAATGTGCTGGTAACTGCTTTGCTTCTTGAGTAGAGCCACCACCACCATAGCCCAGCCAGATGAGTGCTC  
TGTGGACCCACAGCCTAAGCTGAGTGTGACCCAGAAAGCCACGATGTGCTCTGTATCCAGAACACACTTGGCAGA  
TGGAGGAAGCATCTGAGTTTGAGACCATGGCTGTTACAGGGATCATGTAACTTGCTGTTTTTGTGTTTTCTGCC  
GGGTGTTGTATGTGTGGTGAAGTTGCGGATTTATGTTTCAGTGTACTGGAACTTTCCATTTTATTCAAGAAATCT  
GTTTCATGTTAAAAGCCTTGATTAAAGAGGAAGTTTTTATAAT

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**FIGURE 395**

MSHKQIYYSDKYDDEEFYRHVMLPKDIAKLVPKTHLMSESEWRNLGVQQSQGWVHYMIHEPEPHILLFRRPLPK  
KPKK

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**FIGURE 396**

AGCCAGAAATGTGAAGTGCTAGCTGAAGGATGAGCAGCAGCTAGCCAGGCAAAGGGGGCAATGGCGGCTTCCTGT  
GTTCTACTGCACACTGGGCAGAAAGATGCCTCTGATTGGTCTGGGTACCTGGAAGAGTGAGCCTGGTCAGGTAAAA  
GCAGCTGTTAAGTATGCCCTTAGCGTAGGCTACCGCCACATTGATTGTGCTGCTATCTACGGCAATGAGCCTGAG  
ATTGGGGAGGCCCTGAAGGAGGACGTGGGACCAGGCAAGGCGGTGCCTCGGGAGGAGCTGTTTGTGACATCCAAG  
CTGTGGAACACCAAGCACCACCCGAGGATGTGGAGCCTGCCCTCCGGAAGACTCTGGCTGACCTCCAGCTGGAG  
TATCTGGACCTGTACCTGATGCACTGGCCTTATGCCTTTGAGCGGGAGACAACCCCTTCCCAAGAATGCTGAT  
GGGACTATATGCTACGACTCCACCCACTACAAGGAGACTTGGAAGGCTCTGGAGGCACCTGGTGGCTAAGGGGCTG  
GTGCAGGCGCTGGGCCTGTCCAACCTCAACAGTCGGCAGATTGATGACATACTCAGTGTGGCCTCCGTGCGTCCA  
GCTGTCTTGCAGGTGGAATGCCACCCATACTTGGCTCAAAATGAGCTAATTGCCCACTGCCAAGCACGTGGCTTG  
GAGGTAAGTCTTATAGCCCTTTGGGCTCCTCTGATCGTGCATGGCGTGATCCTGATGAGCCTGTCTGTGCTGGAG  
GAACCAAGTAGTCCTGGCATTGGCTGAAAAGTATGGCCGATCTCCAGCTCAGATCTTGCTCAGGTGGCAGGTCCAG  
CGGAAAGTGATCTGCATCCCCAAAAGTATCACTCCTTCTCGAATCCTTCAGAACATCAAGGTGTTTGACTTCACC  
TTTAGCCCAGAAGAGATGAAGCAGCTAAATGCCCTGAACAAAAATTGGAGATATATTGTGCCTATGCTTACGGTG  
GATGGGAAGAGAGTCCCAAGGGATGCAGGGCATCCTCTGTACCCCTTTAATGACCCGTACTAGGACCACAGCTTC  
TTGGCCTCCCTTCCAGCTCTGCAGCTAATGAGGTCCTGCCACAACGGAAGAGGGAGTTAATAAAGCCATTGGAG  
CATCCAT

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**FIGURE 397**

MAASCVLLHTGQKMPLIGLGTWKSEPGQVKAADVGYRHIDCAIYGNPEIIGEALKEDVGPGKAVPREEL  
FVTSKLWNTKHHPEDVEPALRKTLADLQLEYLDLYLMHWPYAFERGDNPFPKNADGTICYDSTHYKETWKALEAL  
VAKGLVQALGLSNFNSRQIDDILSVASVRPAVLQVECHPYLAQNELIAHCQARGLEVTAYSPLGSSDRAWDPDE  
PVLLEEPVVLALAEKYGRSPAQILLRWQVQRKVICIPKSITPSRILQNIKVFDFTFSPPEMKQLNALNKNWRYIV  
PMLTVDGKRVPDAGHPLYPFNDPY

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**FIGURE 398**

GCGGCGCTCGCGCCAAGGGACGTGTTTCTGCGCTCGCGTGGTCATGGAGGCGCTGCCGCTGCTAGCCGCGACAAC  
TCCGGACCACGGCCGCCACCGAAGGCTGCTTCTGCTGCCGCTACTGCTGTTTCCTGCTGCCGGCTGGAGCTGTGCA  
GGGCTGGGAGACAGAGGAGAGGCCCCGGACTCGCGAAGAGGAGTGCCACTTCTACGCGGGTGGACAAGTGTACCC  
GGGAGAGGCATCCCGGGTATCGGTCGCCGACCCTCCCTGCACCTAAGCAAAGCGAAGATTTCCAAGCCAGCGCC  
CTACTGGGAAGGAACAGCTGTGATCGATGGAGAATTTAAGGAGCTGAAGTTAACTGATTATCGTGGGAAATACTT  
GGTTTTCTTCTTCTACCCACTTGATTTACATTTGTGTGTCCAAGTAAATTATCGCTTTTGGCGACAGACTTGA  
AGAATTCAGATCTATAAATACTGAAGTGGTAGCATGCTCTGTTGATTCACAGTTTACCCATTTGGCCTGGATTAA  
TACCCCTCGAAGACAAGGAGGACTTGGGCCAATAAGGATTCCACTTCTTTCAGATTTGACCCATCAGATCTCAAA  
GGACTATGGTGTATACCTAGAGGACTCAGGCCACACTCTTAGAGGTCTCTTCATTATTGATGACAAAGGAATCCT  
AAGACAAATTACTCTGAATGATCTTCTGTGGGTAGATCAGTGGATGAGACACTACGTTTGGTTCAAGCATTCCA  
GTACACTGACAAACACGGAGAAGTCTGCCCTGCTGGCTGGAAACCTGGTAGTGAAACAATAATCCAGATCCAGC  
TGAAAAGCTGAAGTATTTGATAAACTGAATTGAGAAATACTTCTTCAAGTTATGATGCTTGAAAGTTCTCAATA  
AAGTTCACGGTTTCATTACCA

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**FIGURE 399**

MEALPLLAATTPDHGRHRRLLLLPLLLFLLPAGAVQGWETEERPRTREEECHFYAGGQVYPGEASRVSVADHSLH  
LSKAKISKPAPYWEGTAVIDGEFKELKLTDIRGKYLVFFFYPLDFTFVCPTEIIAFGDRLEEFRSINTEVVACSV  
DSQFTHLAWINTPRRQGGLGPIRIPLLSDLTHQISKDYGVYLEDSGHTLRGLFIIDDKGILRQITLNDLPVGRSV  
DETLRLVQAFQYTDKHGEVCPAGWKPGSETIIPDPAGKLKYFDKLN

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**FIGURE 400**

CCGCTGGGCGTAGCTGCGACTCGGCGGAGTCCCGGCGGCGCGTCCTTGTTCTAACCCGGCGCGCC**ATG**ACCGTCCG  
CGCGGCCGAGCGTGCCCGCGGCGCTGCCCCCTCCTCGGGGAGCTGCCCCGGCTGCTGCTGCTGGTGCTGTTGTGCC  
TGCCGGCCGTGTGGGGTGACTGTGGCCTTCCCCCAGATGTACCTAATGCCAGCCAGCTTTGGAAGGCCGTACAA  
GTTTTCCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAAAATTCCTGGCGAGAAGGACTCAG  
TGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGAAGAGTTCTGCAATCGTAGCTGCGAGGTGCCAACAAGGC  
TAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTATTTTCCAGTCGGTACTGTTGTGGAATATGAGT  
GCCGTCCAGGTTACAGAAGAGAACCTTCTCTATCACCAAACTAACTTGCCTTCAGAATTTAAAATGGTCCACAG  
CAGTCGAATTTTGTA AAAAGAAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTG  
GCATATTATTTGGTGCAACCATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTTCTAGTTTTT  
GTCTTATTTTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGCAGAGAAATTTATTGTCCAGCACCAC  
CACAAATTGACAATGGAATAATTCAAGGGGAACGTGACCATTATGGATATAGACAGTCTGTAACGTATGCATGTA  
ATAAAGGATTACCATGATTGGAGAGCACTCTATTTATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCC  
CACCACCTGAATGCAGAGGAAAATCTCTAACTTCCAAGTCCCACCAACAGTTCAGAAACCTACCACAGTAAATG  
TTCCAACCTACAGAAGTCTCACCAACTTCTCAGAAAAACCACCACAAAAACCACCACACCAAAATGCTCAAGCAACAC  
GGAGTACACCTGTTTCCAGGACAACCAAGCATTTTCATGAAACAACCCCAAATAAAGGAAGTGGAAACCACTTCAG  
GTACTACCCGTCTTCTATCTGGGCACACGTGTTTCACGTTGACAGGTTTGCTTGGGACGCTAGTAACCATGGGCT  
TGCTGACT**TAG**CCAAAGAAGAGTTAAGAAGAAAATACACACAAGTATACAGACTGTTTCTTAGTTTCTTAGACTTA  
TCTGCATATTGGATAAAATAAATGCAATTGIGCTCTTCATTTAGGATGCTTTTATTGTCTTTAAGATGTGTTAGG  
AATGTCAACAGAGCAAGGAGAAAAAAGGCAGTCCTGGAATCACATTCTTAGCACACCTACACCTCTTGAAAAATAG  
AACAACTTGCGAATTGAGAGTGATTCCCTTTCCATAAAAGTGTAAGAAAGCATAGAGATTTGTTTCGTATTTAGAAT  
GGGATCACGAGGAAAAGAGAAGGAAAGTGATTTTTTTCCACAAGATCTGTAATGTTATTTCCACTTATAAAGGAA  
ATAAAAAATGAAAAACATTATTTGGATATCAAAAGCAAATAAAAACCCAATTCAGTCTCTTCTAAGCAAAATTGC  
TAAAGAGAGATGAACCACATTATAAAGTAATCTTTGGCTGTAAGGCATTTTCATCTTTCCCTTCGGGTGGCAAAA  
TATTTTAAAGGTAAAACATGCTGGTGAACCAGGGGTGTTGATGGTGATAAGGGAGGAATATAGAATGAAAGACTG  
AATCTTCCTTTGTTGCACAAATAGAGTTTGGA AAAAGCCTGTGAAAGGTGTCTTCTTTGACTTAATGTCTTTAAA  
AGTATCCAGAGATACTACAATATTAACATAAGAAAAGATTATATATTATTTCTGAATCGAGATGTCCATAGTCAA  
ATTTGTAAATCTTATTCTTTTGTAATATTTATTTATATTTATTTATGACAGTGAACATTCTGATTTTACATGTAA  
AACAAAGAAAAGTTGAAGAAGATATGTGAAGAAAAATGTATTTTTCTTAAATAGAAATAAATGATCCCATTTTTTG  
GT

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**FIGURE 401**

MTVARPSVPAALPLLGELPRLLLLVLLCLPAVWGDCGLPPDVPNAQPALEGRTSFPEDTVITYKCEESFVKIPGE  
KDSVICLKGSQWSDIEEFCNRSCEVPTRLNSASLKQPYITQNYFPVGTVVEYECRPGYRREPSLSPKLTCLQNLK  
WSTAVEFCKKKSCPNPGEIRNGQIDVPGGILFGATISFSCNTGYKLFGSTSSFCLISGSSVQWSDPLPECREIYC  
PAPPQIDNGIIQGERDHYGYRQSVTYACNKGFTMIGEHSIYCTVNNDEGEWSGPPPECRGKSLTSKVPPTVQKPT  
TVNVPTEVSPTSQKTTTKTTTPNAQATRSTPVSRTTKHFHETTPNKGSGTTS GTTRLLSGHTCFTLTGLLGLTV  
TMGLLT



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**FIGURE 402**

**ATG**TTCCGAGCGGCGGGCTCCGGGGCAGCTCCGGCGGGCGGGCCTCATTGCTACGATTTTCAGAGTACCCTGGTAATA  
GCTGAGCATGCAAATGATTCCCTAGCACCCATTACTTTAAATACCATTACTGCAGCCACACGCCTTGGAGGTGAA  
GTGTCCTGCTTAGTAGCTGGAACCAAATGTGACAAGGTGGCACAAGATCTCTGTAAAGTAGCAGGCATAGCAAAA  
GTTCTGGTGGCTCAGCATGATGTGTACAAAGGCCTACTTCCAGAGGAAGTACACCATTGATTTTGGCAACTCAG  
AAGCAGTTCAATTACACACACATCTGTGCTGGAGCATCTGCCTTCGGAAAGAACCTTTTGCCCAGAGTAGCAGCC  
AACTTGAGGTTGCCCCGATTCTGACATCATTGCAATCAAGTCACCTGACACATTTGTGAGAACTATTTATGCA  
GGAAATGCTCTATGTACAGTGAAGTGTGATGAGAAAGTGAAAGTGTTTTCTGTCCGTGGAACATCCTTTGATGCT  
GCAGCAACAAGTGGCGGTAGTGCCAGTTCAGAAAAGGCATCAAGTACTTCACCAGTGGAAATATCAGAGTGGCTT  
GACCAGAAATTAACAAAAAGTGATCGACCAGAGCTAACAGGTGCCAAAGTGGTGGTATCTGGTGGTCGAGGCTTG  
AAGAGTGGAGAGAACTTTAAGTTGTTATATGACTTGGCAGATCAACTACATGCTGCAGTTGGTGCTTCCCGTGCT  
GCTGTTGATGCTGGCTTTGTTCCCAATGACATGCAAGTTGGACAGACGGGAAAAATAGTAGCACCAGAACTTTAT  
ATTGCTGTTGGAATATCTGGAGCCATCCAACATTTAGCTGGGATGAAAGACAGCAAGACAATTGTGGCAATTAAT  
AAAGACCCAGAAGCTCCAATTTTCCAAGTGGCAGATTATGGAATAGTTGCAGATTTATTTAAGGTAGTTCCTGAA  
ATGACTGAGATATTGAAGAAAAAA**TGA**ATCAGGATCATGCCTTAAAAAGAAAACCTTTTGTTAAAGTATTCCACTG  
AAATCACAGATATTTGTGGGTATTATAACAATCATTGGAAAGCATGGAGAGCTACATTTTATAAATTTGAGGGAAA  
ATTTCTAACAGATGCCAGAATGCTTGTTTATGGGATTGCTGTGTTTCCTTTTAATTATTTGTGGTTCCAAACAAT  
TATTGTTTGAACTTTTTTAATTCTGTACTAAAACTATAATAAAGCTTTTCCACAGCTTTAAAACT

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**FIGURE 403**

MFRAAAPGQLRRAASLLRFQSTLVIAEHANDSLAPITLNTITAATRLGGEVSCLVAGTKCDKVAQDLCKVAGIAK  
VLVAQHVDVYKGLLPEELTPLILATQKQFNYTHICAGASAFGKNLLPRVAAKLEVAPISDIIAIKSPDTFVRTIYA  
GNALCTVKCDEKVKVFSVRGTSFDAAATSGGSASSEKASSTSPVEISEWLDQKLTKSDRPELTGAKVVVSGGRGL  
KSGENFKLLYDLADQLHAAVGASRAAVDAGFVPNDMQVGQTGKIVAPELYIAVGISGAIQHLAGMKDSKTIVAIN  
KDPEAPIFQVADYGIVADLFKVVPEMTEILKKK

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**FIGURE 404**

CTGATCCGGGCCGGGCGGGAAGTCGGGTCCCGAGGCTCCGGCTCGGCAGACCGGGCGGAAAAGCAGCCGAGCGGCC  
ATGGGAGCTGTGCGGGCTGGGGCTGCCCCGGCCGCCCATGCTGCTGGCGCTGCTGTTGGCGACACTGCTGGCGGGCG  
ATGTTGGCGCTGCTGACTCAGGTGGCGCTGGTGGTGCAGGTGGCGGAGGCGGGCTCGGGCCCCGAGCGTCTCGGCC  
AAGCCGGGGCCGGCGCTGTGGCCCCCTGCCGCTCTCGGTGAAGATGACCCCGAACCTGCTGCATCTCGCCCCGGAG  
AACTTCTACATCAGCCACAGCCCCAATTCCACGGCGGGCCCCCTCCTGCACCCTGCTGGAGGAAGCGTTTCGACGA  
TATCATGGCTATATTTTTGGTTTCTACAAGTGGCATCATGAACCTGCTGAATTCCAGGCTAAAACCCAGGTTTCAG  
CAACTTCTTGTCTCAATCACCCCTCAGTCAGAGTGTGATGCTTTCCCCAACATATCTTCAGATGAGTCTTATACT  
TTACTTGTGAAAGAACCAGTGGCTGTCCTTAAGGCCAACAGAGTTTGGGGAGCATTACGAGGTTTAGAGACCTTT  
AGCCAGTTAGTTTATCAAGATTCTTATGGAACCTTTCACCATCAATGAATCCACCATTATTGATTCTCCAAGGTTT  
TCTCACAGAGGAATTTTGATTGATACATCCAGACATTATCTGCCAGTTAAGATTATTCTTAAAACTCTGGATGCC  
ATGGCTTTTAATAAGTTTAATGTTCTTCACTGGCACATAGTTGATGACCAGTCTTTCCCATATCAGAGCATCACT  
TTTCTGAGTTAAGCAATAAAGGAAGCTATTCTTTGTCTCATGTTTATACACCAAATGATGTCCGTATGGTGATT  
GAATATGCCAGATTACGAGGAATTCGAGTCCTGCCAGAATTTGATACCCCTGGGCATACACTATCTTGGGGAAAA  
GGTCAGAAAGACCTCCTGACTCCATGTTACAGTAGACAAAACAAGTTGGACTCTTTTGGACCTATAAACCCCTACT  
CTGAATACAACATACAGCTTCCTTACTACATTTTTCAAAGAAATTAGTGAGGTGTTTCCAGATCAATTCATTCAT  
TTGGGAGGAGATGAAGTGGAATTTAAATGTTGGGAATCAAATCCAAAATTCAAGATTTTCATGAGGCAAAAAGGC  
TTTGGCACAGATTTTAAGAACTAGAATCTTCTACATTCAAAGGTTTTGGATATTATTGCAACCATAAACAAAG  
GGATCCATTGTCTGGCAGGAGGTTTTTGATGATAAAGCAAAGCTTGCGCCGGGCACAATAGTTGAAGTATGGAAA  
GACAGCGCATATCCTGAGGAACTCAGTAGAGTCACAGCATCTGGCTTCCCTGTAATCCTTTCTGCTCCTTGGTAC  
TTAGATTTGATTAGCTATGGACAAGATTGGAGGAAATACTATAAAGTGGAACCTCTTGATTTTGGCGGTACTCAG  
AAACAGAAACAACTTTTTCATTGGTGGAGAAGCTTGTCTATGGGGAGAATATGTGGATGCAACTAACCTCACTCCA  
AGATTATGGCCTCGGGCAAGTGCTGTTGGTGAGAGACTCTGGAGTTCCAAAGATGTCAGAGATATGGATGACGCC  
TATGACAGACTGACAAGGCACCGCTGCAGGATGGTGAACGTGGAATAGCTGCACAACCTCTTTATGCTGGATAT  
TGTAACCATGAGAACATGTAAAAAAATGGAGGGGAAAAAGGCCACAGCAATCTGTACTACAATCAACTTTATTTTG  
AAATCATGTAAAATAAGATATTAGACTTTTTTGAATAAAATATTTTTATTGATTGAA

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**FIGURE 405**

MELCGLGLPRPPMLLALLLATLLAAMLALLTQVALVVQVAEAAARAPSVSAKPGPALWPLPLSVKMTPNLLHLAPE  
NFIYISHSPNSTAGPSCITLLEEAFFRRYHGYIFGFYKWHHEPAEFQAKTQVQQLLVSIITLQSECDAFPNISSDESYT  
LLVKEPVAVLKANRVWGALRGLETFSQLVYQDSYGTFTINESTIIDSPRFSHRGILIDTSRHYLPVKIILKTLDA  
MAFNKFNVLHWHIVDDQSFPYQSITFPELSNKGSYSLSHVYTPNDVRMVIEYARLRGIRVLPEFDTPGHTLSWGK  
GQKDLLTPCYSRQNKLDSEFGPINPTLNNTYSFLTTFKEISEVFPDQFIHLGGDEVEFKCWESNPKIQDFMRQKG  
FGTDFKKLESFYIQKVLDIATINKGSIVWQEVFDDKAKLAPGTIVEVWKDSAYPEELSRVTASGFPVILSAPWY  
LDLISYGQDWRKYYKVEPLDFGGTQKQKQLFIGGEACLWGEYVDATNLTPRLWFRASAVGERLWSSKDVRDMDDA  
YDRLTRHRCRMVERGIAAQPLYAGYCNHENM

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**FIGURE 406**

CTGGTCCCGAGCACGAGCTGTGAGGGGATTCACTTGTGTGCGGAACTCCTCGGAACCAATGGCGTCCCTTTCCCTT  
GCACCTGTTAACATCTTTAAGGCAGGAGCTGATGAAGAGAGAGCAGAGACAGCTCGTCTGACTTCTTTTATTGGT  
GCCATCGCCATTGGAGACTTGGTAAAGAGCACCTTGGGACCCAAAGGCATGGACAAAATTCTTCTAAGCAGTGGA  
CGAGATGCCTCTCTTATGGTAACCAATGATGGTGCCACTATTCTAAAAAACATTGGTGTTGACAATCCAGCAGCT  
AAAGTTTTAGTTGATATGTCAAGGGTTCAAGATGATGAAGTTGGTGATGGCACTACCTCTGTTACCGTTTTAGCA  
GCAGAATTATTAAGGGAAGCAGAATCTTTAATTGCAAAAAAGATTTCATCCACAGACCATCATAGCGGGTTGGAGA  
GAAGCCACGAAGGCTGCAAGAGAGGCGCTGTTGAGTTCTGCAGTTGATCATGGTTCCGATGAAGTTAAATTCGCT  
CAAGATTTAATGAATATTGCGGGCACAACATTATCCTCAAACTTCTTACTCATCACAAAGACCACTTTACAAAG  
TTAGCTGTAGAAGCAGTTCTCAGACTGAAAGGCTCTGGCAACCTGGAGGCAATTCATATTATCAAGAAGCTAGGA  
GGAAGTTTGGCAGATTCTTATTTAGATGAAGGCTTCCTGTTGGATAAAAAAATTGGAGTAAATCAACCAAAACGA  
ATTGAAAATGCTAAAATTCTTATTGCAAACTACTGGTATGGATACAGACAAAATAAAGATATTTGGTTCCCGGGTA  
AGAGTTGACTCTACAGCAAAGGTTGCAGAAATAGAACATGCGGAAAAGGAAAAAATGAAGGAGAAAGTTGAACGT  
ATTCTTAAGCATGGAATAAATTGCTTTATTAACAGGCAATTAATTTATAATTATCCTGAACAGCTCTTTGGTGCT  
GCTGGTGTGATGGCTATTGAGCATGCAGATTTTGCAGGTGTGGAACGCCTAGCTCTTGTCACAGGTGGTGAAATT  
GCCTCTACCTTTGATCACCCAGAAGTGGTGAAGCTTGGAAGTTGCAAACTTATCGAGGAAGTCATGATTGGAGAA  
GACAAACTCATTCACTTTTTCTGGGGTTGCCCTTGGTGAGGCTTGTAACATTGTTTTGCGTGGTGCCACTCAACAA  
ATTTTAGATGAAGCAGAAAGATCATTGCATGATGCTCTTTGTGTTCTTGCGCAAACTGTAAAGGACTCTAGAACA  
GTTTATGGAGGAGGCTGTTCTGAGATGTTGATGGCTCATGCTGTGACACAGCTTGCCAATAGAACACCAGGCAAA  
GAAGCTGTTGCAATGGAGTCTTATGCTAAAGCACTGAGAATGTTGCCAACCATCATAGCTGACAATGCAGGCTAT  
GACAGTGACAGACCTGGTGGCACAGCTCAGGGCTGCTCACAGTGAAGGCAATACCACTGCTGGATTGGATATGAGG  
GAAGGCACCATTGGAGATATGGCTATCCTGGGTATAACAGAAAGTTTTCAAGTGAAGCGACAGGTTCTTCTGAGT  
GCAGCTGAAGCAGCAGAGGTGATTCTGCGTGTGGACAACATCATCAAAGCGGCACCCAGGAAACGTGTCCCTGAT  
CACCACCCCTGTTAAGCATTCCCACGTGCTGTCGATCTTTGGACCAGTTTCTAGCAAAGTTGTGTTTGAAAGATA  
CTCTATTAAAGAAGACTGTGGAATCTGTTTATCGGTGCCATTATATCCTTAAGTTTGGATATTTAGCTGACCTT  
CGCTTTAACATAGGTCTAATTTATTTGCCGTGTCATTTTCCATACAAATCAGTTGATTTAAAGGAGTTCATTTG  
CATACTGGGCATTAAAAATAAAAATTTGAACAATGAAAGGAAAAAAGGAGAAAAA

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**FIGURE 407**

MASLSLAPVNIFKAGADEERAETARLTSFIGAIAIGDLVKSTLGPKGMDKILLSSGRDASLMVTNDGATILKNIG  
VDNPAAKVLVDMSRVQDDEVGDGTTSTVTLAAELLREAESLIAKKIHPQTIIAGWREATKAAREALLSSAVDHGS  
DEVKFRQDLMNIAGTTLSKLLTHHKDHFTKLAVEAVLRLKSGNLEAIIHIIKKLGGSLADSYLDEGFLLDKKIG  
VNQPKRIENAKILIAN TGMDTDKIKIFGSRVRVDSTAKVAEIEHAEKEKMEKVERILKHGINCFINRQLIYNYP  
EQLFGAAGVMAIEHADFAGVERLALVTGGEIASTFDHPELVKLGSKLIEEVMIGEDKLIHFSGVALGEACTIVL  
RGATQQILDEAERSLHDALCVLAQTVKDSRTVYGGGCSEMLMAHAVTQLANRTPGKEAVAMESYAKALRMLPTII  
ADNAGYDSADLVAQLRAAHSEGNTTAGLDMREGTIGDMAILGITESFQVKRQVLLSAAEAAEVILRVDNIIKAAP  
RKRVPDHHPC

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**FIGURE 408A**

GAATCAAGGAGGGGAGCCAGTCTCTGCGCTCTGCTCTTCTGCCTCTTGATCTCCGCCACCGTCTTTCAGGCCAGGCCCTT  
GGATGGTATACTGTAAATTCAGCATATGGAGATACCATTATCATACCTTGCCGACTTGACGTACCTCAGAATCTC  
ATGTTTGGCAAATGGAATATGAAAAGCCCGATGGCTCCCCAGTATTTATTGCCTTCAGATCCTCTACAAAGAAA  
AGTGTGCAGTACGACGATGTACCAGAATACAAAAGACAGATTGAACCTCTCAGAAAACCTACACTTTGTCTATCAGT  
AATGCAAGGATCAGTGATGAAAAAGAGATTTGTGTGCATGCTAGTAAGTACTGAGGACAACGTGTTTGAGGCACCTACA  
ATAGTCAAGGTGTTCAAGCAACCATCTAAACCTGAAATTTGTAAGCAAAGCACTGTTTCTCGAAACAGAGCAGCTA  
AAAAAGTTGGGTGACTGCATTTTCAGAAGACAGTTATCCAGATGGCAATATCACATGGGTACAGGAATGGAAAAGTG  
CTACATCCCCTTGAAGGAGCGGTGGTCATAATTTTTTAAAAAGGAAATGGACCCAGTGACTCAGCTCTATACCATG  
ACTTCCACCCTGGAGTACAAGACAACCAAGGCTGACATACAAATGCCATTACCTGCTCGGTGACATATTATGGA  
CCATCTGGCCAGAAAAACAATTCATTCTGAACAGGCAGTATTTGATATTTACTATCCTACAGAGCAGGTGACAATA  
CAAGTGCTGCCACCAAAAAAATGCCATCAAAGAAGGGGATAACATCACTCTTAAATGCTTAGGGAATGGCAACCCT  
CCCCCAGAGGAATTTTTTGTCTTACTTACCAGGACAGCCCCGAAGGAATAAGAAGCTCAAATACTTTACACACTGACG  
GATGTGAGGCGCAATGCAACAGGAGACTACAAGTGTTCCCTGATAGACAAAAAAGCATGATTGCTTCAACAGCC  
ATCACAGTTCACATATTTGGATTGTCTCTTAAACCCAAGTGGAGAAGTGACTAGACAGATTGGTGATGCCCTACCC  
GTGTCTATGCACAATATCTGCTAGCAGGAATGCAACTGTGGTATGGATGAAAGATAACATCAGGCTTCGATCTAGC  
CCGTCATTTTCTAGTCTTCATTATCAGGATGCTGGAAACTATGCTCGCGAAACTGCTCTGCAGGAGGTTGAAGGA  
CTAAAGAAAAGAGAGTCAATTGACTCTCATTGTAGAAGGCAAACCTCAAATAAAAAATGACAAAGAAAACCTGATCCC  
AGTGGACTATCTAAAACAATAATCTGCCATGTGGAAGGTTTTCCAAAGCCAGCCATTCACTGGACAATTACTGGC  
AGTGGAAGCGTCATAAACCAAAACAGAGGAATCTCCTTATATTAATGGCAGGTATTATAGTAAAATTATCATTTCC  
CCTGAAGAGAATGTTACATTAACTTGCACAGCAGAAAAACCAACTGGAGAGAACAGTAAACTCCTTGAATGTCTCT  
GCTATAAGTATTCCAGAACACGATGAGGCAGACGAGATAAGTGATGAAAACAGAGAAAAGGTGAATGACCAGGCA  
AACTAATTGTGGGAATCGTTGTTGGTCTCCTCCTTGCTGCCCTTGTTGCTGGTGTCGCTACTGGCTGTACATG  
AGAAGTCAAAGACTGCATCAAAACATGTAAACAAGGACCTCGGTAATATGGAAGAAAACAAAAAGTTAGAAGAA  
ACAATCACAAAACCTGAAGCCTAAGAGAGAAAACCTGTCTAGTTGTCCAGAGATAAAAAATCATATAGACCAATTGA  
AGCATGAACGTGGATTGTATTTAAGACATAAAACAAAAGACATTGACAGCAATTCAATGTTCAAGTATTAAGCAGTTC  
ATCTACCAAGCTGTACAGGTTTTTCAGAGAATTATCTCAAGTAAAACAAATGAAATTTAATTACAAACAATAAG  
ACAAGTTTTTGGCAGCCATGATAATAGGTCATATGTTGTGTTTGGTTCAATTTTTTTTTCCGTAATGTCTGCACT  
GAGGATTTCTTTTTGGTTTTGCCTTTTATGTAAATTTTTTACGTAGCTATTTTTTATACACTGTAAGCTTTGTTCTG  
GGAGTTGCTGTTAATCTGATGTATAATGTAATGTTTTTATTTCAATTGTTTATATGGATAATCTGAGCAGGTACA  
TTTCTGATTCTGATTGCTATCAGCAATGCCCCAAACTTTCTCATAAGCACCTAAAACCCAAAGGTGGCAGCTTGT  
GAAGATTGGGGACACTCATATTGCCCTAATTAAAAACTGTGATTTTTTATCACAAAGGGAGGGGAGGCCGAGAGTCA  
GACTGATAGACACCATAGGAGCCGACTCTTTGATATGCCACCAGCGAACTCTCAGAAATAAATCACAGATGCATA  
TAGACACACATACATAATGGTACTCCCAAACTGACAATTTTACCTATTTCTGAAAAAGACATAAAACAGAATTTGG  
TAGCACTTACCTCTACAGACACCTGCTAATAAAATTATTTCTGTCAAAAGAAAAAACACAAGCATGTGTGAGAGA  
CAGTTTGGAAAAATCATGGTCAACATTCCCATTTTCATAGATCACAATGTAAATCACTATAATTACAAATTGGTG  
TTAAATCCTTTGGGTTATCCACTGCCTTAAAATTATACCTATTTTCATGTTTAAAAAGATATCAATCAGAATTGGA  
GTTTTTAAACAGTGGTCATTATCAAAGCTGTGTTATTTTCCACAGAATATAGAATATATATTTTTTTTCGTGTGTGT  
TTTTGTAACTACCCTACAGATATTGAATGCACCTTGAGATAAATTAGTGTTTTTAACTGATACATAATTTATCAA  
GCAGTACATGAAAGTGTAATAATAAAATGTCTATGTATCTTTAGTTACATTCAAATTTGTAACCTTTATAAACATG  
TTTTATGCTTGAGGAAATTTTTAAGGTGGTAGTATAAATGGAACTTTTTGAAGTAGACCAGATATGGGCTACTT  
GTGACTAGACTTTTAACTTTTGCTCTTTCAAGCAGAAGCCTGGTTTCTGGGAGAACACTGCACAGTGATTTCTTT  
CCCAGGATTTACACAACCTTTAAAGGGAAGATAAATGAACATCAGATTTCTAGGTATAGAACTATGTTATTGAAAG  
GAAAAGGAAAACCTGGTGTTTGTCTTCTAGACTCATGAAATAAAAAATTTATGAAGGCAATGAAAATAAATTGAAA  
ATTAAGTCAGATGAGAATAGGAATAATACTTTGCCACTTCTGCATTATTTAGAAACATACGTTATTGTACATTT  
GTAAACCATTTACTGTCTGGGCAATAGTGACTCCGTTTAATAAAAGCTTCCGTAGTGCATTGGTATGGATTAAAT  
GCATAAAATATCTTAGACTCGATGCTGTATAAAATATTATGGGAAAAAAGAAAATACGTTATTTTGCCTCTAAACT  
TTTATTGAAGTTTTTATTTGGCAGGAAAAAAAATTGAATCTTGGTCAACATTTAAACCAAAGTAAAAGGGGAAAAA  
CCAAAGTTATTTGTTTTGCATGGCTAAGCCATTCTGTTATCTCTGTAAATACTGTGATTTCTTTTTTTATTTTCTC

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**FIGURE 408B**

TTTAGAATTTTGTAAAGAAATTCTAAAATTTTAAACACCTGCTCTCCACAATAAATCACAAACACTAAAATAA  
AATTACTTCCATATAAATATTATTTTCTCTTTTGGTGTGGGAGATCAAAGGTTTAAAGTCTAACTTCTAAGATAT  
ATTTGCAGAAAGAAGCAACATGACAATAGAGAGAGTTATGCTACATTATTTCTTGGTTTCCACTTGCAATGGTTA  
ATTAAGTCCAAAAACAGCTGTCAGAACCTCGAGAGCAGAACATGAGAACTCAGAGCTCTGGACCGAAAGCAGAA  
AGTTTGCCGGAAAAAAAAAGACCACATTATTACCATCGATTCAAGTGCCTGGATAAAGAGGAAAGCTTACTTGTTT  
AATGGCAGCCACATGCACGAAGATGCTAAGAAGAAAAAGAATTCCAAATCCTCAACTTTTGAGGTTTCGGCTCTC  
CAATTTAACTCTTTGGCAACAGGAAACAGGTTTTGCAAGTTCAAGGTTCACTCCCTATATGTGATTATAGGAATT  
GTTTGTGGAAATGGATTAACATACCCGTCTATGCCTAAAAGATAATAAGAAAACCTGAAATATGCTTCAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 409A**

TCAACACAGGACAATGCAAGCCCATGAGCTGTTCCGGTATTTTCGAATGCCAGAGCTGGTTGACTTCCGACAGTA  
CGTGCGTACTCTTCCGACCAACACGCTTATGGGCTTCGGAGCTTTTGCAGCACTCACCACCTTCTGGTACGCCAC  
GAGACCCAAACCCCTGAAGCCGCCATGCGACCTCTCCATGCAGTCAGTGGAAGTGGCGGGTAGTGGTGGTGACG  
AAGATCCGCACTACTTGACAGCGACGAGCCCTTGGTGTATTTCTATGATGATGTCACAACATTATACGAAGGTTT  
CCAGAGGGGAATACAGGTGTCAAATAATGGCCCTTGTTTAGGCTCTCGGAAACCAGACCAACCCCTATGAATGGCT  
TTCATATAAACAGGTTGCAGAATTGTCGGAGTGCATAGGCTCAGCACTGATCCAGAAGGGCTTCAAGACTGCCCC  
AGATCAGTTTCATTGGCATCTTTGCTCAAAATAGACCTGAGTGGGTGATTATTGAACAAGGATGCTTTGCTTATTC  
GATGGTGATCGTTCCACTTTATGATACCCTTGGAAATGAAGCCATCACGTACATAGTCAACAAAGCTGAACCTCTC  
TCTGGTTTTTGTGACAAGCCAGAGAAGGCCAAACTCTTATTAGAGGGTGTAGAAAATAAGTTAATACCAGGCCT  
TAAAATCATAGTTGTCTATGGATGCCTACGGCAGTGAACCTGGTGGAAACGAGGCCAGAGGTGTGGGGTGGAAGTCAC  
CAGCATGAAGGCGATGGAGGACCTGGGAAGAGCCAACAGACGGAAGCCCAAGCCTCCAGCACCTGAAGATCTTGC  
AGTAATTTGTTTCACAAGTGGAACTACAGGCAACCCCCAAAGGAGCAATGGTCACTCACCGAAACATAGTGAGCGA  
TTGTTTCAGCTTTTGTGAAAGCAACAGAGAATACAGTCAATCCTTGCCAGATGATACTTTGATATCTTTCTTGCC  
TCTCGCCCATATGTTTGAGAGAGTTGTAGAGTGTGTAATGCTGTGTCATGGAGCTAAAATCGGATTTTTTCCAAGG  
AGATATCAGGCTGCTCATGGATGACCTCAAGGTGCTTCAACCCACTGTCTTCCCCGTGGTTCCAAGACTGCTGAA  
CCGGATGTTTGACCGAATTTTTCGGACAAGCAAAACACCACGCTGAAGCGATGGCTCTTGACTTTGCCTCCAAGAG  
GAAAGAAGCAGAGCTTCGCAGCGGCATCATCAGAAAACAACAGCCTGTGGGACCGGCTGATCTTCCACAAAAGTACA  
GTCGAGCCTGGGCGGAAGAGTCCGGCTGATGGTGACAGGAGCCGCCCGGTGTCTGCCACTGTGCTGACGTTCCCT  
CAGAGCAGCCCTGGGCTGTCTAGTTTTATGAAGGATACGGACAGACAGAGTGCAGTGCCTGGGTGCTGCCTAACCAT  
GCCTGGAGACTGGACCGCAGGCCATGTTGGGGCCCCGATGCCGTGCAATTTGATAAAACTTGTGTGATGTGGAAGA  
AATGAATTACATGGCTGCCGAGGGCGAGGGCGAGGTGTGTGTGAAAGGGCCAAATGTATTTTCAGGGCTACTTGAA  
GGACCCAGCGAAAACAGCAGAAGCTTTGGACAAAGACGGCTGGTTACACACAGGGGACATTGGAAAATGGTTACC  
AAATGGCACCTTGAAAATTATCGACCGGAAAAAGCACATATTTAAGCTGGCACAAGGAGAATACATAGCCCCCTGA  
AAAGATTGAAAATATCTACATGCGAAGTGAGCCTGTTGCTCAGGTGTTTGTCCACGGAGAAAGCCTGCAGGCATT  
TCTCATTGCAATTGTGGTACCAGATGTTGAGACATTATGTTCTCTGGGCCAAAAGAGAGGATTTGAAGGGTCTGTT  
TGAGGAACCTGTGCAGAAATAAGGATGTCAAAAAAGCTATCCTCGAAGATATGGTGAGACTTGGGAAGGATTCTGG  
TCTGAAACCATTTGAACAGGTCAAAGGCATCACATTGCACCCTGAATTATTTCTATCGACAATGGCCTTCTGAC  
TCCAACAATGAAGGCGAAAAGGCCAGAGCTGCGGAACTATTTTCAGGTGCGAGATAGATGACCTCTATTCCACTAT  
CAAGGTTTAGTGTGAAGAAGAAAGCTCAGAGGAAATGGCACAGTTCCACAATCTCTTCTCCTGCTGATGGCCTTC  
ATGTTGTTAATTTTGAATACAGCAAGTGTAGGGAAGGAAGCGTTTCGTGTTTGACTTGTCCATTCCGGGGTCTTCT  
CATAGGAATGCTAGAGGAAACAGAACACCGCCTTACAGTCACTCATGTTGCAGACCATGTTTATGGTAATACAC  
ACTTTCCAAAATGAGCCTTAAAAATTGTAAAGGGGATACTATAAATGTGCTAAGTTATTTGAGACTTCCTCAGTT  
TAAAAAGTGGGTTTTAAATCTTCTGTCTCCCTGCTTTTCTAATCAAGGGGTAGGACTTTGCTATCTCTGAGATG  
TCTGCTACTTGTGCAAATCTGCAGCTGTCTGCTGCTCTAAAGAGTACAGTGCAGTACAGAGGGAAGTGTTCCTT  
TAAAAATAAGAACAACCTGTCTGGCTGGAGAATCTCACAAGCGGACCAGAGATCTTTTTAAATCCCTGCTACTGT  
CCCTTCTCACAGGCATTACAGAACCCTTCTGATTTCGTAAGGGTTACGAAACTCATGTTCTTCTCCAGTCCCCTG  
TGGTTTTCTGTTGGAGCATAAGGTTTTCCAGTAAGCGGGAGGGCAGATCCAACCTCAGAACCATGCAGATAAGGAGCC  
TCTGGCAAAATGGGTGCTCATCAGAACGCGTGGATTCTCTTTTCATGGCAGAATGCTCTTGGACTCGGTTCTCCAGG  
CCTGATTCCCCGACTCCATCCTTTTTTCAGGGGTTATTTAAAAATCTGCCTTAGATTCTATAGTGAAGACAAGCAT  
TTCAAGAAAGAGTTACCTGGATCAGCCATGCTCAGCTGTGACGCCCTGAATAACTGTCTACTTTATCTTCACTGAA  
CCACTCACTCTGTGTAAAGGCCAACAGATTTTAAATGTGGTTTTTCATATCAAAGATCATGTTGGGATTAACCTG  
CCTTTTTCCCCAAAAATAAACTCTCAGGCAAGCATTCTTTAAAGCTATTAAGGGAGTATATACTTGAGTACTT  
ATTGAAATGGACAGTAATAAGCAAATGTTCTTATAATGCTACCTGATTTCTATGAAATGTGTTTGACAAGCCAAA  
ATTCTAGGATGTAGAAATCTGGAAAGTTCAATTCCTGGGATTCACCTCTCCAGGGATTTTTTAAAGTTAATTG  
GAAATTAACAGCAGTTCACTTTATTGTGAGTCTTTGCCACATTGACTGAATTGAGCTGTCAATTTGTACATTTAA  
AGCAGCTGTTTTGGGGTCTGTGAGAGTACATGTATTATATACAAGCACAAACAGGGCTTGCACTAAAGAATTGTCA  
TTGTAATAACACTACTTGGTAGCCTAACTTCATATATGTATTCTTAATTGCACAAAAAGTCAATAATTTGTCACC  
TTGGGGTTTTGAATGTTTGCTTTAAGTGTGGCTATTTCTATGTTTTATAAACCAAAACAAAATTTCCAAAAACA

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**FIGURE 409B**

ATGAAGGAAACCAAATAAATATTTCTGCATTTCG

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**FIGURE 410**

MQAHELFRYFRMPPELVDFRQYVRTLPNTLTMGFGAFAALTTFWYATRPKPLKPPCDLSMQSVEVAGSGGARRSAL  
LDSDEPLVYFYDDVTTLYEGFQRGIQVSNNGPCLGSRKPDQPYEWLSYKQVAELSECIGSALIQKGFKTAPDQFI  
GIFAQNRPEWVIEEQGCFAYSMVIVPLYDTLGNEAITYIVNKAELSLVFVDKPEKAKLLLEGVENKLIPGLKIIIV  
VMDAYGSELVERGQRCGVEVTSMKAMEDLGRANRRKPKPPAPEDLAVICFTSGTTGNPKGAMVTHRNIVSDCSAF  
VKATENTVNPCPDDTLISFLPLAHMFERVVECVMLCHGAKIGFFQGDIRLLMDDLKVLQPTVFPVVPRLNRMFD  
RIFGQANTTLKRWLLDFASKRKEAELRSGIIRNNSLWDRLIFHKVQSSLGGRVRLMVTGAAPVSATVLTFLRAAL  
GCQFYEGYGQTECTAGCCLTMPGDWTAGHVGAPMPCNLIKLVDEEMNYMAAEGEGEVCKGPNVFGYLGKDPK  
TAEALDKDGLHTGDIGKWLPLNGTLKIIDRKKHIFKLAQGEYIAPEKIENIYMRSEPVQVFVHGESLQAFLIAI  
VVPDVETLCSWAQKRGFEGLCRNKDVKKAILEDMVRLGKDSGLKPFQVKGITLHPELFSIDNGLLTPTMK  
AKRPELRNYFRSQIDDLYSTIKV

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**FIGURE 411**

GAGAATGGCTCAACTCTCCAAATAGAGAGAATTTCTATCAGTTGCAAGTACGAAAATTTCTGCCGATTATATAA  
AATACTGGGAGTTTGCAGTTTATCTGGAAGAATGTGAACTGGCTAAACAGCTTTATCCAAAGGAAAACGATTTGG  
TGTTTTTAGCTCCTGAGAGAATAAATGAAGAGAAGAAAGATACAGAGAGAAATGACATACAAGATCTCCACGAAT  
ATCATTCTGGTTATGTTTCATAAATTTCCGCCGACGTCAGTCAATGCGTAATGGGAAAACAGTGTACCTTTCCA  
TCCAGACTCAAGAGAACTTTCCGGCCAATTTAAACGAACCTGTGAATTGTATTGTAATCAGTTCTCTGGTAACTA  
CACAAAGGAAGTTGAAAGCCATGTCTCTGTTGGGTAGTCGGAACCAACTGGCTAGAGCTGTTCTGAATCCAAACC  
CTATGGACTTCTGTACAAAAGATTTACTGACTACAACATCTGAGAGAATTATTGCGTACTTAAGAGATTTCAATG  
AAGATCAAAAGAAAGCAATAGAACTGCATATGCTATGGTGAAACACTCACCATCAGTTGCCAAAATCTGCTTGA  
TTCATGGACCACCTGGAACAGGAAAATCAAAAATATTGTTGGCCTCCTCTATCGTCTACTGACAGAGAACCAGA  
GGAAGGGGCATTGAGACGAAAACCTCCAATGCCAAAATCAAACAAAACCGTGTCTCGTGTGTGCACCTTCCAATG  
CAGCTGTTGATGAACTCATGAAAAAATTATCCTTGAATTCAAAGAAAAATGTAAAGACAAGAAGAATCCTTTAG  
GAACTGTGGAGATATAAATTTAGTACGACTGGGTCCAGAAAAGTCTATTAATAGTGAGGTTCTAAAGTTCAGTT  
TGGACAGCCAAGTAAACCACAGAATGAAAAAAGAGTTACCTTCTCATGTTTCAAGCGATGCATAAAAAGAAAGGAAT  
TTCTAGATTATCAGCTGGATGAGCTTTCCCGGCAGCGAGCTCTATGCCGAGGTGGACGGGAAAATACAGAGGCAAG  
AATTAGATGAAAACATTTCCAAAGTTTCTAAGGAAAAGGCAGGAACCTGCTTCTAAAATTAAGAGGTTCAAGGAC  
GCCCACAGAAAACACAGAGTATCATCATCTTAGAGTCCCATATCATCTGCTGCACGTTGAGCACAAGTGGTGGTT  
TACTACTTGAGTCTGCTTTCCGTGGGCAAGGGGGTGTCCCTTTCAGCTGTGTCATTGTTGATGAGGCTGGACAGT  
CTTGTTGAAATTGAGACTCTTACTCCACTCATCCATCGCTGCAATAAGCTCATCCTAGTAGGAGATCCTAAGCAGC  
TCCCTCCGACAGTCATCTCTATGAAAGCACAGGAGTATGGCTACGACCAGTCAATGATGGCTCGCTTCTGCAGAC  
TGCTGGAAGAGAATGTAGAACACAACATGATCAGCAGGCTGCCATTCTACAGCTCACTGTTTCACTACAGGATGC  
ATCCAGACATATGCCTCTTCCCTTCTAATTATGTTTATAACAGAACTTAAAAACAAATAGACAGACAGAAGCCA  
TTCGATGTTTCATCAGATTGGCCATTTTCAGCCATACCTTGTGTTTGTATGTTGGAGATGGTTTCAGAAAGACGGGATA  
ATGACTCATATATAAATGTTCAAGAAATAAACTGGTGATGGAAATAATTAAGCTTATTAAGACAAAAGAAAGG  
ATGTTAGTTTTTCGAAACATTGGCATAATAACTCATTACAAGGCCCAGAAGACGATGATTGAGAGGATTGAGACA  
AAGAGTTTCGATAGAAAAGGACCAGCAGAAGTAGACACTGTGGATGCATTCCAGGGTCGGCAGAAGGATTGTGTTA  
TTGTTACGTGTGTGTCAGAGCAAATAGCATCCAAGGTTCAATTGGATTCCCTGGCAAGTTTGCAGAGATTGAATGTCA  
CCATCACACGAGCCAAGTACAGCCTCTTCATCCTCGGACATTTGAGGACCCTGATGGAAAACCAGCATTGGAATC  
AGCTGATTCAGGATGCTCAGAAGCGTGGTGCCATTATTAAGACCTGTGACAAAACTATAGACATGATGCAGTGA  
AGATTCTGAACTCAAGCCTGTGCTGCAGAGAAGTCTCACTCACCTCCTACCATAGCCCCAGAGGGGTCCAGAC  
CCCAGGGTGGTTTGCCCAGCAGCAAGCTAGACAGTGGATTTGCCAAGACATCTGTTGCTGCTTCTCTATACCACA  
CACCTCTGACTCCAAGGAAATTACTCTTACTGTTACTTCAAAGGACCCTGAAAGACCTCCTGTTTCATGACCAAC  
TTCAGGACCCACGACTGCTGAAGAGGATGGGCATTGAGGTCAAAGGAGGAATATTCTTTGGGATCCACAACCTT  
CGAGCCCCCAGCATCCTGGAGCAACACCTCCTACGGGCGAGCCGGGCTTCCCTGTGTTTACCAGGACCTGAGCC  
ATATACAGCAGCCCCGCTGCTGTAGTGGCTGCTCTGAGCAGCCACAAACCTCCCGTGCAGGGGCGAACCTCCAGCTG  
CCAGTCCCAGAGGCTTCCACGTGTGTCAGAGCAAATGTGATGACCCGGAAGAGGAGCTCTGTACAGGAGAGAGGCCA  
GGGCTTTCAGTGAAGGGGAGCAGGAGAAGTGTGGTTCCGAGACCCATCACACCAGGAGGAACCTCTAGGTGGGACA  
AGAGGACACTGGAGCAGGAGGACAGCAGTTCCAAGAAAAGAAAAGCTTTTATAGGAAAGCCAGTGACATGGGCCA  
GCAGCCACAGCATATTGTAACTGAAGATGACCAGCTCGTGGGACCATCTAGATAAGCTTGTTTTTTGTAAAGGAG  
TTTGTGTGCTGTTGGAAAACATGGAAAATGCATCCTTAACACCTGAGCCTCTGGTTCATCTTCAGTATTTTCTGTC  
ATTTGCAAAAAGCTTTCAGAGGGCATTGTGTATCCGTAATAATGTCTTGAAGTCAGAGACTGGAAATGTTGATCT  
CTTAGTCTTCTATAGACAAGGAGGTCAGACTGGAGTGAATGTTGTAAAAGTTGAAATGTATATTTGTATAGCAAA  
TAACAAAATCCTTTTAAATTT

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**FIGURE 412**

MRNGKTECYLSIQEQENFPANLNELVNCIVISSIVTTQRKLKAMSLGSRNQLARAVLNPNPMDFCTKDLLTTTS  
ERIIAYLRDFNEDQKKAJETAYAMVKHSPSVAKICLIHGPPGTGKSKTIVGLLYRLLTENQRKGHSDESNNAKIK  
QNRVLVCAPSNAAVDELMKKIIIEFKEKCKDKKNPLGNCGDINLVRLGPEKSINSEVLKFSLD SQVNHRMCKKELP  
SHVQAMHKRKEFLDYQLDELSRQRALCRGGREIQRQELDENISKVSKERQELASKIKEVQGRFQKTQSI I I I L E S H  
IICCTLSTSGGLLLES AFRGQGGVPPFSCVIVDEAGQSCEIETLTPLIHRCNKLILVGDPKQLPPTVISMKAQEY G  
YDQSMMARFCRLLEENVEHNMISRLPILQLTVQYRMHPDICLFPSNYVYNRNLKTNRQTEAIRCSSDWPFQPYLV  
FDVGDGSEERRDNDSYINVQEI KLVMEI I KLIKDKRKDV SFRNIGI I THYKAQKTMIQKDL DKEFDRKGPAEVDTV  
DAFQGRQKDCVIVTCVRANSIQGSIGFLASLQRLNVTITRAKYSLFILGHLRTL MENQHWNQLIQDAQKRGAI I K  
TCDKNYRHDAVKILKLKPV LQ RSLTHPPTIAPEGSRPQGGLPSSKLDSGF AKTSVAASLYHTPSDSKEITLTVTS  
KDPERPPVHDQLQDPRL LKRMGIEVKGGIFLWDPQPSSPQHGPATPPTGEPGFPVVHQDL SHIQQPAAVVAALSS  
HKPPVRGEPPAASPEASTCQSKCDDPEEELCHRREARAFSEGEQEKCGSETHHTRNSRWDKRTLEQEDSSSKKR  
KLL

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**FIGURE 413A**

CGCGCGCTGGGTCCGTGGCGGAGGCTGAGGAGAAGGAGGAGCGGGCCGTGGAGGCTTCGCCGCTAGGTACTGCT  
ATAACCAGAATTTGGTAGAAAAAGGATTTACTTGTGGGGCCCTCTTGATAAAAAGAGATCTGGGGGGATTCTCG  
ACCTGCTAACAGAACTGGACCTTTTCGTGGGAGCCAAGAAGAAAGGTTTGCTCCCGGGTGGAACAGGGATTATCC  
TCCTCCTCCCTTAAGAGTCATGCTCAAGAGAGACACTCTGGCAACTTTCTGGCAGAGATTCACTTCCCTTTGA  
TTTCCAGGGGCATTTCGGGGCCTCCTTTTGCAAATGTAGAGGAGCATTCTTTCAGCTATGGAGCTAGAGACGGACC  
GCATGGTGACTATCGAGGAGGGGAGGGACCTGGACATGATTTTCAGGGGGGAGATTTTTCTGCTTCTGATTTCCA  
GAGCAGAGATTTCATCACAGTTGGACTTCAGGGGTAGGGACATACATTCTGGGGATTTTCGGGATAGAGAAGGACC  
ACCTATGGACTATAGGGGTGGAGATGGTACTTCTATGGATTATAGAGGTAGGGAGGCACCTCATATGAACACAG  
AGACAGGGATGCTCACGCTGTTGACTTCAGAGGTAGGGATGCTCCTCCATCTGACTTCAGGGGCCGGGGCACTTA  
TGATTTAGATTTTAGAGGCCGGGATGGATCCCATGCAGATTTTAGGGGAAGGGATTTATCAGATTTGGATTTTAG  
GGCCAGAGAACAGTCCCCTGCTGATTTTAGGAATAGAGATGTATCTGATTTGGACTTTAGAGACAAAGACGGAAC  
ACAAGTAGACTTTAGAGGCCGAGGTTTCAGGTACTACTGATCTAGACTTTAGGGACAGGGATACGCCACATTCAGA  
TTTCAGAGGTAGACACCGATCTAGGACTGATCAGGATTTTAGGGGCAGAGAGATGGGATCTTGTATGGAATTTAA  
AGATAGGGAGATGCCCCCTGTGGATCCAAATATTTTGGATTACATTCAGCCCTCTACACAAGATAGAGAACATTC  
TGGTATGAATGTGAACAGGAGAGAAGAATCCACACATGACCATACGATAGAAAGGCCTGCTTTTGGCATTTCAGAA  
GGGAGAATTTGAGCATTTCAGAAACAAGAGAAGGAGAAACACAAGGTGTAGCCTTTGAACATGAGTCTCCAGCAGA  
CTTTCAGAACAGCCAAAGTCCAGTTCAAGACCAAGATAAGTCACAGCTTTCTGGACGTGAAGAGCAGAGTTTCAGA  
TGCTGGTCTGTTTTAAAGAAGAAGGCGGTCTGGACTTTCTTGGGCGGCAAGACACCGATTACAGAAAGCATGGAGTA  
CCGTGATGTGGATCATAGGCTGCCAGGAAGCCAGATGTTTGGCTATGGCCAGAGCAAGTCTTTTCCAGAGGGCAA  
AACTGCCCCGAGATGCCAACGGGACCTTCAGGATCAAGATTATAGGACCGGCCCAAGTGAGGAGAAACCCAGCAG  
GCTTATTTCGATTAAGTGGGGTACCTGAAGATGCCACAAAAGAAGAGATTCTTAATGCTTTTCGGACTCCTGATGG  
CATGCCTGTAAAGAACTTGCAAGTGAAGGAGTATAACACAGGTTACGACTATGGCTATGTCTGCGTGGAGTTTTTC  
ACTCTTGGAAGATGCCATCGGATGCATGGAGGCCAACCAGGGAAGTCTAATGATCCAGGACAAAGAAGTTACCCT  
GGAGTATGTATCAAGCCTGGATTTTGGTACTGCAACGATGTAAGGCAACATTGGTGGGCACCGATCTTCCTG  
TTCATTCTGCAAGAACCAGAGAAGTGACAGAGGCCAAGCAAGAATTAATAACCTACCCTCAGCCTCAGAAAAC  
ATCCATACCAGCACCATTGGAAAAACAGCCCCAACAGCCCCCTAAGACCAGCTGATAAGGAACCTGAACCCAGGAA  
GAGGGAAGAAGGCCAAGAGTCACGCTTAGGACATCAAAAGAGAGAAGCAGAAAGGTATCTGCCTCCTTCTCGAAG  
GGAAGGGCCAACCTTCCGAAGAGACCGAGAGAGGGAGTCATGGTCTGGAGAGACACGCCAGGATGGAGAGAGCAA  
AACTATCATGCTAAAGCGTATCTATCGTTCCACACCACCTGAGGTGATAGTGAAGTGCTGGAGCCCTATGTCCG  
CCTTACTACTGCCAACGTCCGTATCATCAAGAACAGAACAGGCCCTATGGGGCATACTATGGCTTTATTGACCT  
CGACTCCCATGCGGAAGCTCTTCGTGTGGTGAAGATCTTACAGAACCTTGATCCGCCATTTAGCATTGATGGGAA  
GATGGTAGCTGTAAACCTGGCCACTGGAAAACGAAGAAATGATTCTGGGGACCATTCTGACCACATGCATTACTA  
TCAGGGTAAAAAATATTTCCGAGATAGGAGGGGAGGTGGCAGAAATTCAGACTGGTCTTCAGATACAAATCGACA  
AGGACAACAGTCATCATCTGACTGCTACATATATGATTCTGCTACTGGCTACTATTATGACCCCTTGGCAGGAAC  
TTATTATGACCCCAATACCCAGCAAGAAGTCTATGTGCCCCAGGATCCTGGATTACCTGAGGAAGAAGAGATCAA  
GGAAAAAAAACCCACCAGTCAAGGAAAGTCAAGTAGCAAGAAGGAAATGTCTAAAAGAGATGGCAAGGAGAAAAA  
AGACAGAGGAGTGACGAGGTTTCAGGAAAAATGCCAGTGAAGGGAAGGCCCTGCAGAAGACGTCTTTAAGAAGCC  
CCTGCCTCCTACTGTGAAGAAGGAAGAGAGTCCCCCTCCACCTAAAGTGGTAAACCCACTGATCGGCCCTCTTGGG  
TGAATATGGAGGAGACAGTGACTATGAGGAGGAAGAAGAGGAGGAACAGACCCCTCCCCCACAGCCCCGCACAGC  
ACAGCCCCAGAAGCGAGAGGAGCAAACCAAGAAGGAGAATGAAGAAGACAAACTCACTGACTGGAATAAACTGGC  
TTGTCTGCTTTGCAGAAGGCAGTTTTCCCAATAAAGAAGTTCTGATCAAACACCAGCAGCTGTCTAGACCTGCACAA  
GCAAAACCTGGAAATCCACCGGAAGATAAAACAGTCTGAGCAGGAGCTAGCCTATCTGGAAAGGAGAGAACGAGA  
GGGAAAGTTTAAAGGAAGAGGAAATGATCGCAGGGAAAAGCTCCAGTCTTTTGACTCTCCAGAAAGGAAACGGAT  
TAAGTACTCCAGGGAAACTGACAGTGATCGTAAACTTGTGATAAAGAAGATATCGACACTAGCAGCAAAGGAGG  
CTGTGTCCAACAGGCTACTGGCTGGAGGAAAGGGACAGGCCCTGGGATATGGCCATCCTGGATTGGCTTCATCAGA  
GGAGGCTGAAGGCCGATGAGGGGCCCAAGTGTGGAGCCTCAGGAAGAACCAGCAAAGACAGTCCAACGAGAC  
TTATCGAGATGCTGTTTCAAGAGTCATGTTTGTCTCGATATAAAGAAGTTCGATTAAGAAAGGAGACAAGTTCCATG  
GGATACAACCTCCCTCTTGTGTTTTGTGTTGTCTCTCTCTTTCTTTTGTACTGTTCTTGCTGCTAGAACTTTTTTAA

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**FIGURE 413B**

ATAAACTTTTTTCAATGTGAAAAAAAAAAAAAAAAAAAA

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**FIGURE 414**

MWGDSRPANRTGPFGRGSQEERFAPGWNRDYPPPLKSHAQERHSGNFPGRDSL PFD FQGHSGPPFANVEEHSFSY  
GARDGPHGDYRGGE GPGHDFRGGDFSSSDFQSRDSSQLDFRGRDIHSGDFRDREGPPMDYRGGDGTSM DYRGREA  
PHMNYRDRDAHAVDFRGRDAPP SDFRGRGT YDLDFRGRD GSHADFRGRDLSDLDFRAREQSRSDFRNRDVSDLDF  
RDKDGTQVDFRGRSGTTDLDFRDRDTPHSDFRGRHRSRTDQDFRGREMGSCMEFKDREMPFVDPNILDYIQPST  
QDREHSGMNVNRREESTHDHTIERPAFGIQKGEFEHSETREGETQGVAFEHESPADFQNSQSPVQDQDKSQLSGR  
EEQSSDAGLFKEEGGLDFLGRQD TDYRSMEYRDVDHRLPGSQMFGYGQSKSFPEGKTARDAQRDLQDQDYRTGPS  
EEKPSRLIRLSGVPEDATKEEILNAFRTPDGMPVKNLQLKEYNTGYDYGVCVEFSLLEDAIGCMEANQGTLMIQ  
DKEVTLEYVSSLD FWYCKRCKANIGGHRSSCSFCKNPREVTEAKQELITYPQPQKTSIPAPLEKQPNQPLRPADK  
EPEPRKREEGQESRLGHQKREAERYLPPSRREGPTFRRDRERESWSGETRQDGESKTI MLKRIYRSTPPEVIVEV  
LEPYVRLTTANVRI IKNRTGPMGHTYGFIDLD SHAEALRVVKILQNLDP PFSIDGKMVAVNLATGKRRNDSGDHS  
DHMHYYQGKKYFRDRRGGRNSDWSSDTNRQQQSSSDCYIYDSATGYYYDPLAGTYYPNTQQEVYVPQDPGLP  
EEEEIKEKKPTSQ GKSSSKKEMSKRDGKEKKDRGVTRFQENASEGKAPAEDVFKKPLPPTVKKEESP PPKV VNP  
LIGLLGEYGGDSYEEEEEEEQT PPPQPRTAQ PQKREEQTKKENEE DKLTDWNKLACLLCRRQFPNKEVLIKHQQ  
LSDLHKQNL EIHRIKIQSEQELAYLERREREGKFKGRGNDRREKLQSFDS PERKRIKYSRETDSDRKLVDKEDID  
TSSKGGCVQQATGWRKGTGLGYGHPGLASSEEAEGRMRGPSVGASGRTSKRQSNETYRDAVRRVMFARYKELD



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**FIGURE 415A**

GACAGCCTCTGGGTCCTCGGTCGGTACAGTCTCTGCACCTCGCGCCCCAGCAGGTAACTAACATTATGGATTTT  
TCCAAGCTACCCAAAATACTCGATGAAGATAAAGAAAGCACATTTGGTTATGTGCATGGGGTCTCAGGACCTGTG  
GTTACAGCCTGTGACATGGCGGGTGCAGCCATGTATGAGCTGGTGAGAGTGGGCCACAGCGAATTGGTTGGAGAG  
ATTATTTCGATTGGAGGGTGCATGGCTACTATTTCAGGTGTATGAAGAACTTCTGGTGTGTCTGTTGGAGATCCT  
GTACTTCGCACTGGTAAACCCCTCTCTGTAGAGCTTGGTCTTGGCATTATGGGAGCCATTTTTGATGGTATTCAA  
AGACCTTTGTGCGATATCAGCAGTCAGACCCAAAGCATCTACATCCCCAGAGGAGTAAACGTGTCTGCTCTTAGC  
AGAGATATCAAATGGGACTTTACACCTTGCAAAAACCTACGGGTTGGTAGTCATATCACTGGCGGAGACATTTAT  
GGAATTGTCAGTGAGAAGCTCGCTTATCAAACACAAAATCATGTTACCCCCACGAAACAGAGGAAGCTGTAACCTTAC  
ATTGCTCCACCTGGGAATTATGATACCTCTGATGTTGTCTTGGAGCTTGAATTTGAAGGTGTAAAGGAGAAGTTC  
ACCATGGTGCAAGTATGGCCTGTACGTCAAGTTCGACCTGTCACTGAGAAGCTGCCAGCCAATCATCCTCTGTTG  
ACTGGCCAGAGAGTCTTGTATGCCCTTTTTCCGTGTGTCCAGGGAGGAACTACTGCTATCCCTGGAGCCTTTGGC  
TGTGGAAAGACAGTGATATCACAGTCTCTATCCAAGTATTCTAACAGTGATGTAATCATCTATGTAGGATGTGGT  
GAAAGAGGAAATGAGATGTCTGAAGTCTTCCGGGACTTCCCAGAGCTCACAATGGAGGTTGATGGTAAGGTAGAG  
TCAATTATGAAGAGGACAGCTTTGGTAGCCAATACCTCCAATATGCCTGTTGCTGCTAGAGAAGCCTCTATTTAT  
ACTGGAATCACACTGTCAGAGTACTTCCGTGACATGGGCTATCATGTCAGTATGATGGCTGACTCTACCTCTAGA  
TGGGCTGAGGCCCTTAGAGAAATCTCTGGTCGTTTAGCTGAAAATGCCTGCAGATAGTGGATATCCAGCCTATCTT  
GGTGCCCGTCTGGCCTCGTTTTATGAACGAGCAGGCAGGGTGAAATGTCTTGAAATCCTGAAAGAGAAGGGAGT  
GTCAGCATTGTAGGAGCAGTTTTCTCCACCTGGTGGTGATTTTTCTGATCCAGTTACATCTGCCACTCTTGGTATC  
GTTTCAGGTGTTCTGGGGCTTAGATAAGAACTAGCTCAACGTAAGCATTTCCTCTGTCAATTGGCTCATCAGC  
TACAGCAAGTATATGCGTGCCTTGGATGAATACTATGACAAACACTTCACAGAGTTCGTTCTCTGAGGACGAAA  
GCTAAGGAAAATCTGCAGGAAGAAGAAGACCTGGCAGAAAATGTACAGCTTGTGGGAAAGGCTTCTTTGGCAGAA  
ACAGATAAAATCACTCTGGAGGTAGCAAACTTATCAAAGATGATTTCTACAACAAAATGGATATACTCCTTAT  
GACAGGTTCTGCCATTCTACAAGACAGTAGGGATGCTGTCCAACATGATTGCATTTTTATGATATGGCTCGTAGA  
GCTGTTGAAACCACTGCCAGAGTGACAATAAAATCACATGGTCCATTATTCGTGAGCACATGGGAGACATCCTC  
TATAAACTTCTCCTCATGAAATTCAAGGATCCACTGAAAGATGGTGAGGCAAAGATCAAAGCGACTATGCACAA  
CTTCTTGAAGACATGCAGAATGCATTCCGTAGCCTTGAAGATTAGAAGCCTTGAAGATTACAACGTGATTTCCT  
TTTCTCAGCAAGCTCCTATGTGTATATTTTCTGAATTTCTCATCTCAAACCTTTGCTTCTTTATTGTGCAGC  
TTTGAGACTAGTGCCTATGTGTGTTATTTGTTTCCCTGTTTTTTTTGGTAGGTCTTATATAAAACAAACATTCCTT  
TGTTCTAGTGTTGTGAAGGGCCTCCCTCTTCTTTATCTGAAGTGGTGAATATAGTAAATATACATTCTGGTTAC  
ACTACTGTAACTTGTATGTAGGGTGATGACCCTCTTTGTCCTAGGTGTACCCTTTCTCATCTCTATTAAATTG  
TAAACAGGACTACTGCATGTACTCTCTTTCAGTGAAATTTGGAATGGAAGGCCAGGTTTCTATAACTTTTGAACA  
GGTACTTTGTGAAATGACTCAATTTCTATTGTGGTAAGCTCATTGGCAGCTTAGCATTTTGCAAAGGAATTGCTT  
TGCAGGAAATATTTAATTTTCAAAAACATAATGATTAATGTTCCAATTATGCATCACTTCCCCAGTATAAATCA  
GGAATGTTTGTGAGAAACCATTTGGGAAGTATACTCTTTTTATTTTTATTTTTTTTATTATTTTTTTTTT  
TGGGGACGGAGTGTCCCTCTTGTGCCCAGGCTGGAGTGCAATGGCGTGATCTTGGCTCACTGCAGCCTTCGCCCT  
CCCGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGCATGCTCCACCATGCCAGCT  
AATTTTGTATTTTTAGTAGAAACGGGGTTTACCATAATTGGTCAGGCTGGTCTCGAACTCCAGACCTCAGGTGAT  
CCGCCCACCTCGGCCTCCCAAAGTCTGGGATTACAGGCGTGAGCCACCGCGCCTGGCCAGGGACTATACTCTTT  
TTAAAAATAGACATTTGTGGGGCTCACACAATATATGAAATAGTACCCTCTAAAAAAGAGAAAAAAAAAATCAGGC  
GGTCAAACTTAGAGCAACATTGTCTTATTAAAGCATAGTTTATTTCACTAGAAAAAATTTAATATCAAGGACTAT  
TACATACTTCATTACTAGGAAGTTCTTTTTAAATGACACTTAAACAATCACTGAAAAGTTGATCCACATCACA  
CCCTGTTTATTTTCTTAAACATCTTGAAGCCTAAGCTTCTGAGAATCATGTGGCAAGTGTGATGGGCAGTAAA  
ATACCAGAGAAGATGTTTAGTAGCAATTAAGGCTGTTTGCACCTTTAAGGACCAGCTGGGCTGTAGTGATTCTT  
GGGGCCAGAGTGGCATTATGTTTTTACAAAATAATGACATATGTCACATGTTTGCATGTTTGTGCTTGTGAA  
TTTTTGAACAGCCAGTTGACCAATCATAGAAAGTATTACTTCTTTTCATATGGTTTTTGGTTCACTGGCTTAAAG  
GGTTTCTCAGAATATCTATGGCCACAGCAGCATACCAGTTTCCATCCTAATAGGAATGAAATTAATTTTGTATCT  
ACTGATAACAGAATCTGGGTCACATGAAAAAATCATTTTATCCGTCTTTTAAGTATATGTTTAAATAATAAT  
TTATGTGTCTGCATATTGCAGAACAGCTCTGAGAGCAACAGTTTCCATTAACTCTTTCTGACCAATAGTGCTGG

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**FIGURE 415B**

CACCGTTGCTTCCTCTTTGGGAAGAGGAAAGGGTGTGTGAACATGGCTAACAATCTTCAAATACCCAAATTGTGA  
TAGCATAAATAAAGTATTTATTTTATGCCTCAGTATATTATTATTTAATTTTTTAGGTAATGCCTATCTCTTGGT  
CTATTAAGGAAAGAAGCAATCAGTAGAGAATTCAGGATAGTTTTGTTTTAAATTCTTGCAGATTACATGTTTTTAC  
AGTGGCCTGCTATTGAGGAAAGGTATTCTTCTATACAACCTTGTTTTAACCTTTGAGAACATTGACAGAAATTATG  
CAATGGTTTGTTGAGATACGGACTTGATGGTGCTGTTTAATCAGTTTGCTTCCAAAGTGGCCTACTCAAGAGGCC  
CTAAGACTGGTAGAAATTAAAAGGATTTCAAAAACCTTCTATTCCCTTTCTTAAACCTACCAGCAAACCTAGGATTG  
TGATAGCAATGAATGGTATGATGAAGAAAGTTTGACCAAATTTGTTTTTTTGTGTTGTTGTTGTTTGAATTTG  
AAATCATTCTTATTCCCTTTAAGAATGTTTATGTATGAGTGTGAAGATGCTAGCGAACCTATGCTCAGATATTCA  
TCGTAAGTCTCCCTTCACCTGTTACAGAGTTTCAGATCGGTCACTGATAGTATGTATTTCTTTAGTAAGAATGTG  
TTAAAATTACAATGATCTTTTAAAAGATGATGCAGTTCTGTATTTATTGTGCTGTGTCTGGTCCTAAGTGGAGC  
CAATTAAACAAGTTTCATATGTATTTTCCAGTGTTGAATCTCACACACTGTACTTTGAAAATTTCCCTCCATCC  
TGAATAACGAATAGAAGAGGCCATATATATTGCCTCCTTATCCTTGAGATTTCACTACCTTTATGTTAAAAGTTG  
TGTATAATTGTTAAAATCTGTGAAAGAATAAAAAGTGGATTTAAATTAAAAA

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**FIGURE 416**

MDFSKLPKILDEDKESTFGYVHGVSGPVVTACDMAGAAMYELVRVGHSELVGEIIRLEGDMATIQVYEETSGVSV  
GDPVLRRTGKPLSVELGPGIMGAIFDGIQRPLSDISSQTQSIYIPRGVNVVSALSRDIKWDFTPCKNLRVGSHITGG  
DIYGIVSENSLIKHKIMLPPRNRGTVTYIAPPGNYSYDTSVVLELEFEGVKEKFTMVQVWPVRQVRPVTEKLPANH  
PLLTGQORVLDALFPCVQGGTTAIPGAFGCGKTVISQSLSKYSNSDVIYVGCGERGNEMSEVLDRDFPELTMEVDG  
KVESIMKRTALVANTSNMPVAAREASIYTGITLSEYFRDMGYHVSMADSTSRWAEALREISGRLAEMPADSGYP  
AYLGARLASFYERAGRVKCLGNPEREGSVSIVGAVSPPGGDFSDPVT SATLGIVQVFWGLDKKLAQRKHFP SVNW  
LISYSKYMRALDEYYDKHFTFVPLRTKAKEILQEEEDLAEIVQLVGKASLAETDKITLEVAKLIKDDFLQQNGY  
TPYDRFCPFYKTVGMLSNMIAFYDMARRAVETTAQSDNKITWSIIREHMGDILYKLSSMKFKDPLKDGEAKIKSD  
YAQLLEDMQNAFRSLED

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**FIGURE 417**

CACGTCGGCTGCTGGGAAGATCTGGATTCTCGTTTCAGGTCACCATCAGAAAAGCTAAGTTTGCTGTATAGTGAG  
GATCAGGAGATCTGATCCTGATTGCAGAACCTTCCCTGATTACAGAATCTTGGATGATTTACAAAAAGTTCATCT  
TCATTGCAGATACCTGCCTTTCTTTCTAGGTTGTATCTCCCACTTCACCCCTTCTAGACCATCCCAGAAGATCTAT  
AAGATTTTCATCTGGGAAATCACTAGGAGTTCTTGGAAGGGAAAGAAGGAAGATTGTTGGTTGGAATAAAAAACAGG  
GTTGAATGAGTTCCAGAAAGCAGGGTTCTCAACCTCGTGGACAGCAATCTGCAGAAGAAGAGAACTTCAAAAAAC  
CAACTAGAAGCAACATGCAGAGAAGTAAAATGAGAGGGGCCTCCTCAGGAAAGAAGACAGCTGGTCCACAGCAGA  
AAAATCTTGAACCAGCTCTCCAGGAAGATGGGGTGGTCGCTCTGCAGAGAACCCCCCTTCAGGATCCGTGAGGA  
AGACCAGAAAGAACAAGCAGAAGACTCCTGGAAACGGAGATGGTGGCAGTACCAGCGAAGCACCTCAGCCCCCTC  
GGAAGAAAAGGGCCCCGGGCAGACCCCACTGTTGAAAGTGAGGAGGCGTTTAAGAATAGAATGGAGGTTAAAGTGA  
AGATTCCTGAAGAATTAAAACCATGGCTTGTTGAGGACTGGGACTTAGTTACCAGGCAGAAGCAGCTGTTTTCAAC  
TCCCTGCCAAGAAAAATGTAGATGCAATTCTGGAGGAGTATGCAATTGCAAGAAATCGCAGGGAAATGTTGATA  
ATAAGGAATATGCGGTTAATGAAGTTGTGGCAGGAATAAAAGAATATTTCAATGTGATGTTGGGCACCTCAGCTGC  
TCTACAAATTTGAGAGGCCCCAGTATGCTGAAATCCTCTTGGCTCACCCCTGATGCTCCAATGTCCCAGGTTTATG  
GAGCACCACACCTACTGAGATTATTTGTAAGAATTGGAGCAATGTTGGCCTATACGCCCCCTTGATGAGAAAAGCC  
TTGCATTATTGTTGGGCTATTTGCATGATTTCTTAAATATCTGGCAAAGAATTCTGCATCTCTCTTTACTGCCA  
GTGATTACAAAGTGGCTTCTGCTGAGTACCACCGCAAAGCCCTGTGAGCGTCTACAGACAGCTCACCATTTTTGT  
CCTGTATCTGTAAACACTTTTTGTTCTTAGTCTTTTTCTTGTAATAATTGATGTTCTTTAAATCGTTAATGTATA  
ACAGGGCTTATGTTTCAGTTTGTTTTCCGTTCTGTTTTAAACAGAAAATAAAAGGAGTGTAAGCTCCTTTTCTCA  
TTTCAAAGTTGCTACCAGTGTATGCAGTAATTAGAACAAAGAAGAAACATTTCAGTAGAACATTTTATTGCCTAGT  
TGACAACATTGCTTGAATGCTGGTGGTTTCTATCCCTTTGACACTACACAATTTTCTAATATGTGTTAATGCTAT  
GTGACAAAACGCCCTGATTCTAGTGCCAAAGGTTCAACTTAATGTATATACCTGAAAACCCATGCATTTGTGCT  
CTTTTTTTTTTTTATGGTGCTTGAAGTAAAACAGCCCATCCTCTGCAAGTCCATCTATGTTGTTCTTAGGCATTCT  
ATCTTTTGCTCAAATTGTTGAAGGATGGTGATTTGTTTCATGGTTTTTGTATTTGAGTCTAATGCACGTTCTAACA  
TGATAGAGGCAATGCATTATTGTGTAGCCACGGTTTTCTGGAAAAGTTGATATTTTAGGAATTGTATTTAGATC  
TTAAATAAAATTTGTTTCTAAATTTT

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**FIGURE 418**

MSSRKQGSQPRGQQSAEEENFKKPTRSNMQRSKMRGASSGKKTAGPQQKNLEPALPGRWGGRSAENPPSGSVRKT  
RKNKQKTPGNGDGGSTSEAPQPPRKKRARADPTVESEEEAFKNRMEVKVKIPEELKPWLVEDWDLVTRQKQLFQLP  
AKKNVDAILEEYANCKKSQGNVDNKEYAVNEVVAGIKEYFNVMLGTQLLYKFERPQYAEILLAHPDAPMSQVYGA  
PHLLRLFVRIGAMLAYTPLDEKSLALLLGYLHDFLKYLAKNSASLFTASDYKVASAEYHRKAL

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**FIGURE 419**

CGGACCGAACGCGGCGGTTCGGCAGCGTTTCGCGCGGGGGCCTGCGAAGCGCTGCTCGGGGCCGGCACTGCCCGCGG  
GGAGGACGCGCCGCGCCGCCACCCAGCGCCGCGCGCGCGCTCCAGCCGGGCGCGCGCTCCCGGGGG  
CCGGCCCCGCGAGCGCAGGAGTAAACACCCCGGAGTCTTGAGCGCGCTGCAGAAGGGAATAAAGAGAGATGCAG  
GGATTTGTGAGGTTACGGCGCCCCAGCTGCAAGATGCACTAGCCGGCTGAACCCGGGATCGGCTGACTTGTTGGA  
ACCGGAGTGCTCTGCACGGAGAGTGGTGGATGAGTTGAAGTTGCCTTCCCGGGGCTCATTTTCCACGCTGCCGAG  
AGGAATCCGAGAGGCAAGGCAATCACTTCGTCTTGCCATTGATTGGGTATCGGGAGCTTTTTTTTCTCCCCTCT  
CTCTTTCTTTTCTCCGTCTTGTTGCATGCAAGAAAATTACAGTCCGCTGCTCGCCCGCCCTGGGTGCGAGATAT  
TCAGCCCCGCTCTCTCCCGTGCATTGTGCAACCCAAAGATGAAAGACCGAAGGGGAGAAAGTTAAAGAAATCGCC  
CACATGCGCTGGATCAGTCCACGGCTTGGGGAAAGGCATCCAGAGAAGGTGGGAGCGGAGAGTTTGAAGTCTTTA  
CAGGCGGGAAGATGGCGGACTGGAGCTGAAAGTGTTGATTGGGAACTTGGGTGATTCTTGTTTATTTACAAT  
CCTCTTGACCCAGGCAGGACACATGAGGCAAAAAACGCTATTTATCTGCTCTCAGCTGGCTCTTGCTCTCGC  
CCTTTTGTTTTATTTTCGGAGGCTTGCAAGTTAGGGCATCGAGGAGCCACAGCCGGAGAGAAGAACACAGCGGTAG  
GAATGGCTTGCAACACCCAGTCCGGATCATTTCTGGCCCCGCTTCCCGAGAGCTCTGCGCCCCCTTCGTTCTTG  
GGATCAATTGGAACACGAGGATTCCAGCGTGACATTTCCCCCGGCGAGAAGCGAGATGCCAACTCCAGCATCTA  
CAAAGGCAAGAAGTGCCGCATGGAGTCTGCTTCGATTTACCCCTTTGCAAGAAAAACGGCTTCAAAGTCTACGT  
ATACCCACAGCAAAAAGGGGAGAAAATCGCCGAAAGTTACCAAAACATTCTAGCGGCCATCGAGGGCTCCAGGTT  
CTACACCTCGGACCCAGCCAGGCGTGCTCTTTGTCTGAGTCTGGATACTTTAGACAGAGACCAGTTGTACC  
TCAGTATGTGCACAATTTGAGATCCAAAGTGCAGAGTCTCCACTTGTGGAACAATGGTAGGAATCATTTAATTTT  
TAATTTATATTCGGGCACCTTGGCCTGACTACACCGAGGACGTGGGGTTTGACATCGGCCAGGCGATGCTGGCCAA  
AGCCAGCATCAGTACTGAAAACCTCCGACCCAACTTTGATGTTTTCTATTCCCCTCTTTTCTAAGGATCATCCCAG  
GACAGGAGGGGAGAGGGGGTTTTTGAAGTTCAACACCATCCCTCCTCTCAGGAAGTACATGCTGGTATTCAAGGG  
GAAGAGGTACCTGACAGGGATAGGATCAGACACCAGGAATGCCTTATATCACGTCCATAACGGGGAGGACGTTGT  
GCTCCTCACCCACCTGCAAGCATGGCAAAGACTGGCAAAGCACAAGGATTCTCGCTGTGACAGAGACAACACCGA  
GTATGAGAAGTATGATTATCGGGAAATGCTGCACAATGCCACTTTCTGTCTGGTTCCCTCGTGCTCGCAGGCTTG  
GTCCTTCAGATTCCCTGGAGGCTTTGCAGGCTGCCTGCGTCCCTGTGATGCTCAGCAATGGATGGGAGTTGCCATT  
CTCTGAAGTGATTAATTGGAACCAAGCTGCCGTATAGGCGATGAGAGATTGTTATTACAGATTCCCTTCTACAAT  
CAGGTCTATTCTCAGGATAAAATCCTAGCACTTAGACAGCAGACACAATTCTTGTTGGGAGGCTTATTTTCTTC  
AGTTGAGAAGATTGTATTAACCTACCTAGAGATTATTCAGGACAGAATATTCAAGCACATATCACGTAACAGTTT  
AATATGGAACAAACATCCTGGAGGATTGTTTCGTACTACCACAGTATTCTATCTTATCTGGGAGATTTTCTTACTA  
CTATGCTAATTTAGGTTTAAAGCCCCCTCCAAATTCAGTGCAGTATCCATGCGGTGACCCCCCTGGTCTCTCA  
GTCCAGCCAGTGTTGAAGCTTCTCGTGGCTGCAGCCAAGTCCAGTACTGTGCCAGATCATAGTTCTATGGAA  
TTGTGACAAGCCCCCTACCAGCCAAACACCGCTGGCCTGCCACTGCTGTGCCTGTCGTCGTCATTGAAGGAGAGAG  
CAAGGTTATGAGCAGCCGTTTTCTGCCCTACGACAACATCATCACAGACGCCGTGCTCAGCCTTGACGAGGACAC  
GGTGCTTTCAACAACAGAGGTGGATTTGCGCTTCACAGTGTGGCAGAGCTTCCCTGAGAGGATTGTGGGGTACCC  
CGCGCGCAGCCACTTCTGGGATAACTCTAAGGAGCGGTGGGGATACACATCAAAGTGGACGAACGACTACTCCAT  
GGTGTGACAGGAGCTGCTATTTACCACAAATATTATCACTACCTATACTCCATTACCTGCCAGCCAGCCTGAA  
GAACATGGTGGACCAATTGGCCAATTGTGAGGACATTCTCATGAACTTCTGGTGTCTGCTGTGACAAAATTGCC  
TCCAATCAAAGTGACCCAGAAGAAGCAGTATAAGGAGACAATGATGGGACAGACTTCTCGGGCTTCCCGTTGGGC  
TGACCTTGACCACTTTGCCAGCGACAGAGCTGCATGAATACGTTTGCCAGCTGGTTTGGCTACATGCCGCTGAT  
CCACTCTCAGATGAGGCTCGACCCCGTCTCTTTAAAGACCAGGTCTCTATTTTGAAGGAAGAAATACCGAGACAT  
TGAGCGACTTTGAGGAATCCGGCTGAGTGGGGGAGGGGAAGCAAGAAGGGATGGGGGTCAAGCTGCTCTCTCTTC  
CCAGTGACAGATCCACTCATCAGCAGAGCCAGATTGTGCCAACTATCCAAAACTTAGATGAGCAGAATGACAAAA  
AAAAAAAGGCCAATGAGAACTCAACTCCTGGCTCCTGGGACTGCACCAGACTGCTCCAACTCACCTCACTGGC  
TTCTGTGTCCCAAGACTAGGTTGGTACAGTTTAATTATGGAACATTAAATAATTATTTTGAIAAAAAAAAAAAAA  
AAAA

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**FIGURE 420**

MQAKKRYFILLSAGSCLALLFYFGGLQFRASRSHSRREEHSGRNLHHPSPDHFWRPFPEPLRPFVPWDQLENED  
SSVHISPRQKRDANSSIYKGGKCRMESCFDFTLCKKNGFKVYVYPQQKGEKIAESYQNILAAIEGSRFYTS DPSQ  
ACLFVLSLDTLDRDQLSPQYVHNLR SKVQSLHLWNNGRNHLIFNLYSGTWPDYTEDVGFDIGQAMLAKASISTEN  
FRPNFDVSIPLFSKDHPRGTGGERGFLKFNTIPPLRKYMLVFKGKRYLTGIGSDTRNLYHVHNGEDVLLTTCKH  
GKDWQKHKDSRCDRDNTEYEKYDYREMLHNATFCLVPRGRRLGSFRFLEALQAACVPVMLSNGWELPFSEVINWN  
QAAVIGDERLLLQIPSTIRSIHQDKILALRQQTQFLWEAYFSSVEKIVLTITLEIIQDRIFKHISRNSLIWNKHPG  
GLFVLPQYSSYLGDFFPYYYANLGLKPPSKFTAVIHAVTPLVSQSQPVLKLLVAAAKSQYCAQIIVLWNC DKPLPA  
KHRWPATAVPVVVIEGESKVMSSRFLPYDNIITDAVLSLDEDTVLTSTTEVDFAFTVWQSFFPERIVGYPARSHFWD  
NSKERWGYTSKWTNDYSMVLTGAAIYHKYYHYLYSHYLPASLKNMVDQLANCEDILMNFLVSAVTKLPPIKVTQK  
KQYKETMMGQTSRASRWADPDHFAQRQSCMNTFASWFGYMP LIHSQMR LDPVLFKDQVSI LRKKYRDIERL

**FIGURE 421A**

[illegible]



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**FIGURE 421B**

TATTGCAGTCTTCGTGATGAAACACCTGAACGTAAATCAGGCCAAGAGAAATCACATTCAGTAAATACTGAAGAA  
AAAATTGGCATTGACATCGATCACACGCAGAGTTACCGAAAACAAATGGAACAGAGTCGTAGGAAACAGCAGATG  
GAAATGGAAATAGCCAAGTCTGAGAAGTTTGGCAGTCCTAAAAAAGATGTAGATGAATATGAAAGACGTAGCCTC  
GTTACGAGGTAGGCCAAACCCCTCAAGATGTCAGTGTACTCTCCTCCTAGCAAAAAGAAAAGGATGGATCAT  
GTCGATTTTGTATCTGCACCAAGCGAGAACGGAATTACAGAAGTTCACGCCAAATCAGCGAAGATTCTGAAAGG  
ACTGGTGGTTCTCCAGTGTCCGACATGGTTCCTTCCATGAAGATGAGGATCCCATAGGCTCCCCTAGGCTACTG  
TCAGTAAAAGGGTCTCCTAAAGTAGATGAAAAAGTCTCCCTATTCTAACATAACAGTCAGGGAAGAGTCTTTA  
AAATTTAATCCTTATGATTCTAGCAGGAGAGAACAGATGGCAGATATGGCCAAAATAAACTATCTGTCTTGAAT  
TCTGAAGATGAACTAAATCGTTGGGACTCTCAGATGAAACAGGATGCTGGCAGATTTGATGTGAGTTTCCCAAAC  
AGCATAATTAAGAGAGATAGCCTTCGAAAAAGGTCTGTACGAGATCTGGAACCTGGTGAGGTGCCTTCTGATTCT  
GACGAAGATGGTGAACACAAATCCCCTCAGGAGCCTCTGCATTATATGAAAGTTCTCGATTGTCTTTTTTA  
TTGAGGGACAGAGAAGACAAGCTACGTGAGCGAGATGAAAGACTCTCTAGTTCTTTAGAAAGGAACAAATTTTAC  
TCTTTTGCATTGGATAAGACAATCACACCAGACACTAAAGCTTTGCTTGAAAGAGCTAAATCCCTCTCTTCATCT  
CGTGAAGAAAATTGGTCTTTTTCTTGATTGGGACTCCCGATTGCAAATTTTCGAAACAACAAAGATAAAAGAAAAG  
GTTGACTCTGCTCCAAGACCTATTCCATCCTGGTACATGAAAAAGAAGAAAATTAGGACTGATTGAGAAGGGAAA  
ATGGATGATAAGAAAGAGGACCATAAAGAAGAAGAGCAAGAGAGGCAGGAATTGTTTGCTTCTCGTTTTTTACAC  
AGCTCAATCTTTGAACAAGATTCCAAGCGATTGCAGCATCTAGAGAGAAAAGAGGAAGATTCTGACTTCATTTCT  
GGTAGGATCTATGGGAAGCAGACATCTGAGGGAGCAAAACAGCACAACCTGATTCCATTCAAGAACCAGTAGTTCTG  
TTCCATAGCAGATTTATGGAGCTCACACGGATGCAACAGAAAGAAAAAGAAAAAGACCAGAAACCCAAAGAGGTT  
GAGAAAACAGGAAGATACAGAGAATCATCCCAAGACCCAGAACTCTGCTCCTGAGAATAAAGATTGAGAACTGAAA  
ACTCCACCTTCCGTTGGGCCTCCAAGTGTACAGTCGTAACCTCTAGAATCAGCCCCATCAGCACTAGAGAAGACC  
ACTGGTGACAAAACGGTAGAGGCGCCTTTGGTAACAGAAGAGAAGACTGTGGAGCCAGCTACCGTCTCAGAAGAA  
GCAAAGCCTGCATCTGAACCTGCTCCTGCCCTGTGGAACAGCTGGAACAAGTAGACCTGCCCCCAGGAGCAGAC  
CCCGATAAAAGAGCTGCCATGATGCCTGCGGGTGTGAGGAAGGTTTCATCAGGTGACCAGCCGCTTATCTGGAT  
GCCAAGCCTCCAACCTCCCGGGCCTCGTTTTCCAGGCAGAGAGCAACGTAGATCCAGAGCCTGACAGTACCCAG  
CCACTTTCAAACCCAGCTCAGAAGTCTGAGGAAGCCAATGAGCCAAAGGCCGAAAAGCCAGACGCCACTGCAGAT  
GCTGAGCCTGATGCAAACAGAAAGCCGAAGCTGCTCCTGAGTCTCAGCCCCAGCTTCTGAAGATTTAGAGGTT  
GATCCTCCAGTTGTGCAAAGGATAAAAAGCCAAACAAAAGCAAGCGTTCAAAGACCCCTGTTTCAGGCAGCTGCA  
GTGAGTATCGTGGAGAAGCCCGTCACAAGGAAGAGTGAGAGGATAGACCGGAAAAAAGTCAAGCGGTCCAATTCT  
CCTCGGGGAGAAGCACAGAAGCTTTTGAATTGAAGATGGAGGCAGAGAAGATTACAAGGACTGCTTCTAAAAAC  
TCTGCTGCAGACCTTGAACATCCCGAACCAAGTTTGCCTCTCAGCCGAACAAGGCGCCGGAATGTAAGGAGCGTC  
TATGCAACCATGGGTGACCATGAAAACCGCTCTCCTGTCAAAGAGCCCGTTGAGCAACCAAGAGTGACCAGAAAAG  
AGATTGGAGCGAGAGCTTCAGGAGGCTGCAGCGGTTCCACCAACCCCTCGGAGGGGAAGGCCTCCAAAGACACGC  
CGGCGAGCCGATGAAGAGGAGGAGAACGAGGCCAAGGAACCTGCAGAAACACTCAAGCCACCTGAGGGATGGCGG  
TCGCCAAGGTCCCAGAAAACCTGCAGCTGGTGGTGGACCCCAAGGGAAAAAGGGAAAAAATGAACCGAAGGTGGAT  
GCTACACGTCCTGAGGCCACCACTGAGGTGGGCCCCCAATAGGCGTGAAAGAGAGCTCCATGGAACCCCAAGGCT  
GCTGAGGAGGAGGCAGGGAGTGAACAGAAACGTGACAGAAAAGATGCTGGCACAGACAAAAACCCCCCTGAAACC  
GCCCCTGTTGAAGTTGTAGAGAAAAACCGGCCCTGAAAAAACTCCAAATCAAAGAGAGGAAGATCTCGAAAC  
TCCAGGTTAGCAGTGGACAAATCTGCAAGTCTGAAAAATGTGGATGCTGCTGTGCTAGTCCCAGGGGGGCTGCAGCA  
CAGGCAGGGGAGAGGGAACTGGGGTGGTGGCAGTCTCCCTGAGAAAAGTGAGAGTCCCCAAAAGGAGGATGGT  
TTATCATCCCAGTTGAAAAGTGATCCAGTTGATCCAGACAAGGAACCAGAGAAAGAAGACGTGTCTGCCTCTGGG  
CCGTCCCCAGAAGCCACCCAGTTAGCCAAGCAGATGGAGCTGGAGCAGGCCGTGGAACACATCGCAAAGCTCGCT  
GAGGCCTCTGCCTCTGCTGCCTATAAGGCAGATGCACCAGAGGGCCTTGCCCCAGAGGACAGGGACAAGCCTGCA  
CACCAGCAAGTGAAACAGAGCTGGCTGCGGCCATCGGCTCCATCATCAATGACATTTCTGGGGAGCCAGAAAAC  
TTCCAGCACCTCCACCTTATCCTGGAGAATCCAGACAGATCTGCAACCCCCCGCAGGTGCACAGGCGCTGCAG  
CCTTCTGAGGAAGGAATGGAGACAGATGAGGCTGTATCTGGCATCCTGGAACTGAGGCTGCTACAGAATCTTCT  
AGGCCTCCAGTCAATGCTCCTGACCCCTCAGCCGGCCCAACAGATACCAAGGAAGCCAGAGGAATAGCAGTGAA  
ACCTCACACTCAGTGCCAGAAGCCAAAGGGTCTAAAGAAGTGGAAGTCACTCTTGTTCCGAAAGACAAAGGGCGC

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**FIGURE 421C**

CAGAAAAACAACCCGATCACGCCGCAAGCGAAACACAAACAAGAAAGTGGTGGCTCCTGTAGAGAGCCATGTCCCT  
GAATCCAACCAAGCTCAAGGTGAGAGTCTGTGCTGCAAATGAGGGGACAACAGTACAGCACCCCGAAGCCCCACAG  
GAAGAAAAAGCAGAGTGAGAAACCCCATTCCTCCTCAGTCATGTACTTCTGACCTAAGCAAGATTCCCTCC  
ACAGAGAATTCGTCCCAAGAAATCAGTGTTGAGGAAAGGACTCCAACCAAAGCATCTGTGCCCCAGACCTTCCC  
CCACCTCCCCAGCCAGCACCCGGTGGATGAGGAGCCTCAAGCCAGGTTTCAGGGTGCATTCCATCATTGAAAGTGAC  
CCGGTGACCCCAACCAGCGATCCAAGCATCCCCATACCCACACTGCCTTCTGTAAGTGCAGCAAAGCTCTCACCT  
CCTGTGCGCTCTGGGGGGATCCCACACCAGAGCCCCCTACTAAGGTGACAGAGTGGATCACAAGGCAGGAGGAG  
CCACGGGCTCAGTCTACTCCATCTCCAGCTCTTCCCCAGACACAAAGGCCTCTGATGTTGACACCAGCTCCAGC  
ACCCTGAGGAAGATTCTCATGGACCCCAAGTATGTGTCTGCCACAAGTGTCACTTCCACAAGTGTCAACCACAGCC  
ATTGCAGAGCCTGTGAGTGTGCCCCCTTGCTACATGAGGCCCCGCCCGCCAGTTGACTCTAAAAAGCCTTTA  
GAAGAAAAAACAGCACCTCCAGTGACAAACAACCTCTGAGATACAAGCCTCGGAGGTGCTGGTAGCTGCTGACAAG  
GAAAAGGTGGCTCCAGTCATTGCTCCCAAAATTACCTCTGTTATTAGCCGGATGCCTGTGAGCATTGACCTGGAA  
AATTCACAGAAGATAACCTTGGCAAAACCAGCTCCTCAAACCTCACTGGTCTGGTGGAGCGCACTCACTGGCCTG  
GTGAACGTCTCCCTGGTCCCGGTGAATGCCCTGAAAGGCCCGTGAAGGGCTCAGTGACCACACTGAAAAGTTTG  
GTGAGCACCCCTGTGGGGCCGTGAACGTCTGAAAGGGCCTGTGAATGTTCTTACGGGGCCAGTGAATGTTCTC  
ACCACTCCAGTGAACGCCACGGTGGGCACAGTGAATGCCGCCAGGCACAGTCAATGCCGCTGCGAGTGCAGTG  
AATGCCACAGCAAGTGCAGTGACCGTCACAGCGGGTGCGGTTACTGCTGCATCTGGTGGTGTAAACGGCCACAACA  
GGCACGGTGACAATGGCAGGGGCAGTGATTGCGCCGTCAACAAAGTGCAAACAGAGAGCGAGTGCTAATGAAAAC  
AGTCGGTTCCACCCAGGGTCCATGCCTGTGATCGACGATCGTCCGGCAGACGCGGGCTCAGGGGCGGGGCTGCGT  
GTGAACACTTCTGAAGGGGTTGTGCTCCTGAGTTACTCAGGGCAGAAGACCGAAGGGCCACAGCGGATCAGCGCC  
AAGATCAGCCAGATCCCCCGGCCAGTGCAATGGACATTGAATTCAGCAGTCAGTGTCCAAGTCCAGGTCAAA  
CCTGATTCTGTACAGCATCGCAGCCTCCATCCAAAGGCCCTCAAGCTCCTGCAGGCTATGCGAACGTGGCCACC  
CATTCCACGTTGGTACTGACCGCCAGACATATAATGCCTCTCCTGTGATTTCTGTGTAAGGCCGATAGGCCA  
TCCTTGAGAAGCCCGAGCCCATTCACCTCTCGGTGTCCACGCCTGTCAACCAGGGAGGCACAGTGAAGGTTCTC  
ACCCAGGGGATCAACACACCCCTGTGCTGGTTCACAACCAGCTGGTCTCACCCTAAGCATTGTCAACCACAAAC  
AAGAAGCTTGCTGACCCCGTCACCTTAAATCGAGACCAAGGTCTTCAGCCGGCCAACCTGGGGTCCACGCTC  
ACGCCCCACACCCCTCCTGTCTGCCCAGCAAACCTGCCTACAGAAGTCAACCATGTCCCCTCGGGGCCCAGCATC  
CCAGCAGATCGAACTGTCTCCCATTTGGCAGCTGCAAAGCTAGATGCTCATTCTCCTCGACCAAGTGGACCCGGG  
CCATCCTCATTCCCAAGGGCAAGCCACCCAGCAGTACTGCATCTACGGCGCTCTCCACCAACGCCACAGTCATG  
CTGGCTGCAGGCATCCAGTGCCCCAGTTCATCTCCAGCATCCACCCAGAGCAGTCTGTATCATGCCACCCAC  
AGCATCACCCAGACTGTGTCCCTGAGCCACCTCTCCAGGGCGAGGTGAGAATGAACACTCCACGCTGCCCAGT  
ATCACCTACAGCATCCGGCCAGAAGCGCTTCACTCTCCTCGGGCTCCGCTGCAGCCCCAGCAAATAGAGGTCAAG  
GCCCCACAGCGTGCCAGCACCCCGCAGCCAGCCCCAGCTGGTGTGCTGCACTGGCCTCCAGCACCCCTCCCGAG  
GAGGAAGTGCATTATCACCTTCCTGTGCTCGAGCCACAGCCCCTGTGCACTCAGAGGTACTAGTCATGCAGTCT  
GAGTACCGACTGCACCCCTATACTGTGCCACGGGATGTGAGGATCATGGTGCATCCACATGTGACGGCAGTCAGC  
GAGCAGCCCAGGGCCGCGGATGGGGTGGTGAAGGTGCCACCAGCCAGCAAGGCCCTCAGCAGCCAGGGAAGGAA  
GCTGCCAAGACACCAGATGCCAAAGCTGCCCCCACCCTGCCCCCGTCCCTGTCCCTGTCCCCCTTCCCT  
GCCCCGTGCTCCTGCCCCCTCATGGTGAAGGCCGATCCTCACAGTTACCCCCAGTAACCAACTCCAGGGGCTGCCT  
CTGACCCCTCCTGTGGTGGTGACCATGGGGTGCAGATTGTGCACTCCAGCGGGGAGCTGTTTCAAGAGTACCGG  
TACGGCGACATCCGCACCTACCACCCCGGGCCAGCTCACACACACTCAGTTTCCCGCGCTTCCCTCTGTTGGC  
CTGCCTTCCCGGACCAAGACAGCTGCTCAGGGCCCTCCTCCTGAAGGTGAGCCCCCTGCAGCCTCCTCAGCCTGTG  
CAGTCCACACAGCCTGCCCAGCCTGCACCACCTGCCCGCCCTCCAGCTCGGTGAGCCCGGCCAGCCACCAAGC  
AGCAAGATGCCTCAAGTGTCCCAGGAGGCAAAGGGGACCCAGACGGGAGTAGAGCAGCCTCGCCTCCAGCTGGA  
CCTGCAAACAGGCCACCTGAGCCTCACACCAGGTTTCAGAGGGCACAAGCAGAAACAGGCCCGACTTCCCTTCCCC  
TCCCCCTGTGTCTGTCTCCATGAAGCTGACCTTCCAGTCTCTCTTCCCACTCAGACTGCCCCAAAACAGCCGTTG  
TTTGTCCCAACAACCTCTGGCCCCAGCACCCACCAGGACTGGTTCTGCCACACACTGAATTCAGCCAGCCCCC  
AAACAAGATTCTCTCCACACCTGACTTCCAGAGACCCGTGGATATGGTTCAACTTCTGAAGAAGTACCCCATC  
GTGTGGCAGGGCCTGCTGGCCCTCAAGAATGACACAGCTGCTGTGAGCTCCACTTCGTCTCTGGCAACAACGTC

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**FIGURE 421D**

CTGGCCCATCGGTCCCTGCCCCCTTTCTGAAGGAGGGCCCCCACTAAGGATCGCCAGAGGATGCGGGCTGGAGGCA  
ACGCAGCTGGAAGGGGTTGCCCGAAGGATGACGGTGGAGACAGATTACTGTCTGCTGCTGGCTCTGCCCTGTGGC  
CGTGACCAAGAGGATGTTGTGAGCCAGACCGAGTCCCTCAAGGCTGCCTTCATCACTTACCTGCAGGCCAAGCAG  
GCGGCAGGGATCATCAACGTTCCCAACCCTGGCTCCAATCAGCCTGCCTACGTGCTGCAGATCTTCCCGCCCTGT  
GAGTTCTCTGAGAGTCACCTGTCCCGCCTGGCCCCCTGACCTCCTTGCCAGCATCTCCAACATCTCTCCCCACCTC  
ATGATTGTCATTGCCTCCGTGTGAGCCACTGAGTGGTTATCACCTCAGTGAATCTTCCAGGGCTCTGCAGTAAA  
AACAAAGGACAACCCAGCCAAGCAGAGGAAGAAGCTGCCGAAGGGGACAGACTCCACTGCCAGACGGCCAGCCGT  
TTGCTGTCTTGCCGCCCGGCTCAGTCGGCCAGACTTCCTCTAGGAGTGGTGCTGCTACCTTGTATGTTTACATAA  
TGCTTTAGCCCAAGGACACATCACCAACCCATGGACTCGCAGACACCGGGGCTGGGTTTCTCTTTCCTCTTTTTG  
GAGAAAAGGAACAGGGCAGTGAATGAAAATTTTTTGTGTTGTTGTTTTTAAGAAACAAGAAAACAGAACTGCCT  
TTGCACTAAATTAGTGACTTGGACTTTTGCCAGTGAAGACAGGCTGTGACACTCTGGATGTCTTGGTGTGTGTA  
GACACACATTGCAGACTCTTAACGCAGGAAGGACTTCAAACCTTCTGCTGAGACCTTGGGGTCAAGGAACATTTCA  
TTGGTTTTTTTTTGTCACCCCCATCTCCCTTGCTCATTGATGCGTCACCTTAATTCTCCTGCTGCCACCGTCT  
TTGATTACCGGGATGTACAGTTTACAGTTGAAGAGCAAACAGAAAGGTTTTCTCTTGGTGGGATATGCAGAACT  
TGGGATGTGTGTATATATAAATATATAATATATATAAATATATATAAATACTGACTTAAAAAATCAAATCCCCCGA  
CATACGTTTTTTTTTAATCTGTGCCAAAAATGTGTTTTTCAGAGGAAATCTTATTTTCATATTCAGACTTTGTATTG  
CCCACTCATTGTATAAGTGCGCTTCGGTACAGCACGGGTCTGCTCCCGCGATGTGGAAGTGTACACGGCACC  
TGTACAAAAAGACTGGCTAACCCTCTTCCTATTACCTTGATCTCTTCCCCCAACTTCCTAACACTTATTAATTT  
ATGAAACTGTTTTTCTCAGCGCAGTTTTGTTTTGTGTGTCCATTGGATTACAACTTTATTAAAAAATATAAAAC  
AC

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**FIGURE 422**

MVRETRHLWVGNLPENVREEKIIIEHFKRYGRVESVKILPKRGSEGGVAAFVDFVDIKSAQKAHNSVNKMGDRDLR  
TDYNEPGTIPSAARGLDDTVSIASTRREVSGFRGGGGGPAYGPPPSLHAREGRYERRLDGASDNRRERAYEHSAYG  
HHERGTGGFDRTRHYDQDYRDPRERTLQHGLYYASRSRSPNRFDAHDPRIEPRAREQFTLPSVVHRDIYRDDIT  
REVRGRRPERNYQHRSRSPHSSQSRNQSPQRLASQASRPTRSPSGSGSRSSSSSDSISSSSTSSDSSDSSSS  
SSDDSPARSVQSAAVPAPTSQLLSSLEKDEPRKSFGIKVQNLPRSTDTSKDGFLHEFKKFGKVTSVQIHGTSE  
ERYGLVFFRQOEDQEKALTASKGKLFFGMQIEVTAWIGPETESENEFRPLDERIDEFHPKATRTLFIGNLEKTTT  
YHDLRNIFQRFGIIVDIDIKKVNQVPQYAFLOQCDIASVCKAIKKMDGEYLGNNRLKLGFGKSMPTNCVWLDGLS  
SNVSDQYLTRHFCRYGPVVKVVFDRKGMALVLYNEIEYAQAQAVKETKGRKIGGNKIKVDFANRESQLAFYHCME  
KSGQDIRDFYEMLAERREERRASYDYNQDRTYYESVTRTPGTYPEDSRDYPARGREFYSEWETYQGDIYESRYD  
DPREYRDYRNDPYEQDIREYSYRQEREREREREFESDRDRDHERRPIERSQSPVHLRRPQSPGASPSQAERLPD  
SERRLYSRSSDRSGSCSSSLSPRYEKLDKSRLERYTKNEKTDKERTFDPERVERERRLIRKEKVEKDKTDKQKRK  
GKVHSPSSQSSETDQENEREQSPEKPRSCNKLREKADKEGIAKNRLELMP'CVVLTRVKEKEGKVIDHTPVVEKLK  
AKLDNDTVKSSALDQKLQVSQTEPAKSDLSKLESVRMKVPKEKGLSSHVEVVEKEGRLKARKHLKPEQPADGVSA  
VDLEKLEARKRRFADSNLKAQKQKPEVKKSSPEMEDARVLSKKQPDVSSREVILLREGEAERKPVRKEILKRESK  
KIKLDRNLNTVASPKDCQELASISVGSGSRPSSDLQARLGELAGESVENQEVQSKKPISPKPQLKQLQVLDQGP  
REDVRKNYCSLRDETPERKSGQEKSHSVNTEEKIGIDIDHTQSYRKQMEQSRRKQMEMEIAKSEKFGSPKKDVD  
EYERRSLVHEVGKPPQDVTDDSPPSKKKRMHDVDFDICTKRERNYRSSRQISEDSERTGGSPSVRHGSFHEDED  
IGSPRLLSVKGSPKVDEKVLPSNITVREESLKFNPYDSSRREQMADMAKIKLSVLNSEDELNRWDSQMKQDAGR  
FDVSFPNSIIKRDLSLRKRSVRDLEPGEVPSDSEDEGEHKSHSPRASALYESSRSLSFLLRDREDKLRERDERLSS  
LERNKFYSFALDKTITPDTKALLERAKSLSSSREENWSFLDWDSRFANFRNNKDKEKVD SAPRPIPSWYMKKKKI  
RTDSEGKMDKKEDHKEEQERQELFASRFLHSSIFEQDSKRLQHLEKEEDSDFISGRIYKQTSEGANSTTDS  
IQEPVVLFSRSMELTRMQQKEKEKDQKPKEVEKQEDTENHPKTPESAPENKDSELKTPPSVGPPSVTVVTLESA  
PSALEKTTGDKTVEAPLVTEEKTVEPATVSEEAKPASEPAPAPVEQLEQVDLPPGADPDKEAAMPAGVEEGSSG  
DQPPYLDAPPTPGASFSAESNVDPEPDSTQPLSKPAQKSEANEPKAEKPDATADAEPDANQKAEAPESQPP  
ASEDLEVDPVAAKDKPNKSKRSKTPVQAAVSVIEKPVTRKSERIDREKLKRSNSPRGEAQKLELKMEDIAKI  
TRTASKNSAADLEHPEPSLPLSRTRRRNVRSVYATMGDHENRSPVKEPVEQPRVTRKRLERELQEAAVPTTPRR  
GRPPKTRRRADEEEENEAKEPAETLKPPEGWRSRSPRSQKTAAGGGPQGGKG

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**FIGURE 423**

GATGCGGGGAGCGGCGTCCGCCAAGCTACTTCTACCGCCAGCACCTTCGTGAAGCCCATTTTCAGTCGGGACAT  
GAACGAGGCCAAGCGGAGGGTGC GCGAGCTCTACCGCGCCTGGTATCGGGAGGTGCCGAACACTGTGCACCAATT  
CCAGCTGGACATCACTGTGAAAATGGGACGGGATAAAGTCCGAGAAATGTTTATGAAGAATGCCCATGTCACAGA  
CCCCAGGGTGGTTGATCTTCTGGTCATTAAGGGAAAGATCGAACTGGAAGAAACAATTAAAGTATGGAAGCAGCG  
GACACATGTTATGCGGTTCTTCCATGAAACAGAAGCGCCAAGGCCAAAGGATTTCTATCCAAGTTCTATGTTGG  
CCACGATCCATGAAGTCATTTCAGTGGAAGATGCACGTTGATACTATTTTAGAGCACAAATAAACTCACTATACA  
ATGGTCACTTTGTGATAGAATTCCATTGATGAACCAATTTTCTGCAGCCTCTTTTGCCTGAGCAAGTGGGACCT  
TGGTATACACATCACCTGTTCTTTCCCTTTTCTTGAAATGTGGTGTTTGCTGTAAATTGGATTGAATTATTTTTC  
TCAGAGCCTTGCATGTCAGTAAACAGGAAGGAAGGAGGCCATCTGTTCAAAAATTGTGACATTGGGCATGAGGCT  
GGACGACTTGTTAATGTAGTTGTTTCTATAGCCCCTATGATTAGACACTTCAGTGTCAGGGCACAGATTATCTAA  
AATTAGCCAGCTCTTCTGTGAGGGATCAGGGCAGCACTAACAGGCGCAAAGTAGAGCTGTCAAGATGGGCTAG  
TTTTCTTGGGTTCTGAAGAAAATGGATGTGCAAAGGCTTGGCTCCGCTACTTGTAACAAGCTCCAGCCCTTAAA  
ATGAAATTAACCTTCTACTCAGGCACCCTGCTTAGGTGCACAGCTGTTCAATATACACAGAGAACAGAAATATTC  
CTACTGTCTTTGGAAACCCTGGTGTACCTCTCAGTGGCAGAATAAACATCAACACAGGTTCAAGAAGTGAAGAAA  
AAAAAAAAAAAAA

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**FIGURE 424**

MAGSGVRQATSTASTFVKPIFSRDMNEAKRRVRELYRAWYREVPNTVHQFQLDITVKMGRDKVREMFMKNAHVTD  
PRVVDLLVIKKGIELEETIKVWKQORTHVMRFFHETEAPRPKDFLSKFYVGHDP

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**FIGURE 425**

GCGTCCCCACACCACAGACCCGCGCCGCCGACGACCCAGCAGCCGCCATGCGTCTGCTCCGAGGTGTGTTTGTA  
GTTGCTGCTAAGCGAACGCCCTTTGGAGCTTACGGAGGCCTTCTGAAAGACTTCACTGCTACTGACTTGTCTGAA  
TTTGCTGCCAAGGCTGCCTTGTCTGCTGGCAAAGTCTCACCTGAAACAGTTGACAGTGTGATTATGGGCAATGTC  
CTGCAGAGTTCTTCAGATGCTATATATTTGGCAAGGCATGTTGGTTTTCGCGTGTGGGAATCCCAAAGGAGACCCCA  
GCTCTCACGATTAATAGGCTCTGTGGTTCTGGTTTTTCAGTCCATTGTGAATGGATGTCAGGAAATTTGTGTTAAA  
GAAGCTGAAGTTGTTTTATGTGGAGGAACCGAAAGCATGAGCCAAGCTCCCTACTGTGTCAGAAATGTGCGTTTTT  
GGAACCAAGCTTGGATCAGATATCAAGCTGGAAGATTCTTTATGGGTATCATTAAACAGATCAGCATGTCCAGCTC  
CCCATGGCAATGACTGCAGAGAATCTTACTGTAAAACACAAAATAAGCAGAGAAGAATGTGACAAATATGCCCTG  
CAGTCACAGCAGAGATGGAAAGCTGCTAATGATGCTGGCTACTTTAATGATGAAATGGCACCAATTGAAGTGAAG  
ACAAAGAAAGGAAAACAGACAATGCAGGTAGACGAGCATGCTCGGCCCCAAACCACCCTGGAACAGTTACAGAAA  
CTTCCTCCAGTATTCAAGAAAGATGGAAGTGTACTGCAGGGAATGCATCGGGTGTAGCTGATGGTGCTGGAGCT  
GTTATCATAGCTAGTGAAGATGCTGTAAAGAAACATAACTTCACACCACTGGCAAGAATTGTGGGCTACTTTGTA  
TCTGGATGTGATCCCTCTATCATGGGTATTGGTCCTGTCCCTGCTATCAGTGGGGCACTGAAGAAAGCAGGACTG  
AGTCTTAAGGACATGGATTTGGTAGAGGTGAATGAAGCTTTTGCTCCCCAGTACTTGGCTGTTGAGAGGAGTTTG  
GATCTTGACATAAGTAAAACCAATGTGAATGGAGGAGCCATTGCTTTGGGTCACCCACTGGGAGGATCTGGATCA  
AGAATTACTGCACACCTGGTTCACGAATTAAGGCGTCGAGGTGGAAAAATATGCCGTTGGATCAGCTTGCATTGGA  
GGTGGCCAAGGTATTGCTGTCATCATTAGAGCACAGCCTTGAAGAGACCAGTGAGCTCACTGTGACCCATCCTTA  
CTCTACTTGGCCAGGCCACAGTAAAACAAGTGACCTTCAGAGCAGCTGCCACAACCTGGCCATGCCCTGCCATTGA  
AACAGTGATTAAGTTTGATCAAGCCATGGTGACACAAAAATGCATTGATCATGAATAGGAGCCCATGCTAGAAGT  
ACATTCTCTCAGATTTGAACCAGTGAAATATGATGATTTCTGAGCTAAACTCAACTATAGAAGACATTAAAAG  
AAATCGTATTCTTGCCAAGTAACCACCCTTCTGCCTTAGATAATATGATTATAAGGAAATCAAATAAATGTTGC  
CTTAACCTTC

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**FIGURE 426**

MRLLRGVVFVAAKRTPF GAYGGLLKDF TATDLSEFAAKAALSAGKVSPETVDSVIMGNVLQSSSDAIYLARHVGL  
RVGIPKETPALTINRLCGSGFQSIVNGCQEICVKEAEVVL CGGTESMSQAPYCVRNVRFGTKLGSDIKLED SLWV  
SLTDQHVQLPMAMTAENLTVKHKISREECDKYALQSQQRWKAANDAGYFNDEMAPIEVKTKKGKQTMQVDEHARP  
QTTLQLQLPVPVFKKDGTVTAGNASGVADGAGAVIIASEDAVKKHNF TPLARIVGYFVSGCDPSIMGIGPVP AI  
SGALKKAGLSLKDMDLVEVNEAFAPQYLAVERSLDDISKTNVNGGAIALGHPLGGSGSRITAHLVHELRRRG GK  
YAVGSACIGGGQGIAVIIQSTA



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**FIGURE 427**

CGCGCCAGGGCGAGGGCACCGCCGCCGGTCTGGGCGCGCTGGGCCTGCCCGGAATCCCGCCGCCTGCGCCCCGCGC  
CCCGCGCCCTGCGGGCCATGGGAGCCGGCCGCCGGCAGGGACGACGCCTGTGAGACCCGCGAGCGGCCCTCGGGGA  
CCATGGGGAGCGATCGGGCCCCGAAGGGCGGAGGGGGCCCCGAAGGACTTCGGCGCGGGACTCAAGTACAACCTCCC  
GGCACGAGAAAGTGAATGGCTTGGAGGAAGGCGTGGAGTTCTTGCCAGTCAACAACGTCAAGAAGGTGGAAAAGC  
ATGGCCCCGGGCGCTGGGTGGTGTGCTGGCAGCCGTGCTGATCGGCCTCCTCTTGGTCTTGCTGGGGATCGGCTTCC  
TGGTGTGGCATTTCAGTACCGGGACGTGCGTGTCCAGAAGGTCTTCAATGGCTACATGAGGATCACAAATGAGA  
ATTTTGTGGATGCCTACGAGAACTCCAACCTCCACTGAGTTTGTAAAGCCTGGCCAGCAAGGTGAAGGACGCGTGA  
AGCTGCTGTACAGCGGAGTCCCATTCCTGGGCCCCCTACCACAAGGAGTCGGCTGTGACGGCCTTCAGCGAGGGCA  
GCGTCATCGCCTACTACTGGTCTGAGTTTACGATCCCGCAGCACCTGGTGGAGGAGGCCGAGCGCGTCATGGCCG  
AGGAGCGCGTAGTCATGCTGCCCCCGGGGCGCGCTCCCTGAAGTCCTTTGTGGTACCTCAGTGGTGGCTTTCC  
CCACGGACTCCAAAACAGTACAGAGGACCCAGGACAACAGCTGCAGCTTTGGCCTGCACGCCCCGCGGTGTGGAGC  
TGATGCGCTTCACCACGCCCCGCTTCCCTGACAGCCCCCTACCCGCTCATGCCCGCTGCCAGTGGGCCCCCTGCGGG  
GGGACGCCGACTCAGTGTGAGCCTACCTTCCGCAGCTTTGACCTTGCCTGCTGCGACGAGCGCGGCAGCGACC  
TGGTGCAGGTGTACAACACCCTGAGCCCCATGGAGCCCCACGCCCTGGTGCAGTTGTGTGGCACCTACCCCTCCCT  
CCTACAACCTGACCTTCCACTCCTCCCAGAACGTCTGCTCATCACACTGATAACCAACACTGAGCGGCGGCATC  
CCGGCTTTGAGGCCACCTTCTTCCAGCTGCCTAGGATGAGCAGCTGTGGAGGCCGCTTACGTAAAGCCAGGGGA  
CATTCAACAGCCCCCTACTACCCAGGCCACTACCCACCCAAACATTGACTGCACATGGAACATTGAGGTGCCCAACA  
ACCAGCATGTGAAGGTGCGCTTCAAATTCTTCTACCTGCTGGAGCCCGCGTGCCTGCGGGCACCTGCCCCAAGG  
ACTACGTGGAGATCAATGGGGAGAAATACTGCGGAGAGAGGTCCAGTTCGTGCTCACCAGCAACAGCAACAAGA  
TCACAGTTCGCTTCCACTCAGATCAGTCTACACCGACACCGGCTTCTTAGCTGAATACCTCTCCTACGACTCCA  
GTGACCCATGCCCCGGGGCAGTTACGTGCCGCACGGGGCGGTGTATCCGGAAGGAGCTGCGCTGTGATGGCTGGG  
CCGACTGCACCGACCACAGCGATGAGCTCAACTGCAGTTGCGACGCCGCCACCAGTTACGTGCAAGAACAAGT  
TCTGCAAGCCCCCTCTTCTGGGTCTGCGACAGTGTGAACGACTGCGGAGACAACAGCGACGAGCAGGGGTGCAGTT  
GTCCGGCCCCAGACCTTCAGGTGTTCCAATGGGAAGTGCCTCTCGAAAAGCCAGCAGTGAATGGGAAGGACGACT  
GTGGGGACGGGTCCGACGAGGCCTCCTGCCCCAAGGTGAACGTCGTCACTTGTACCAAAACACACCTACCGCTGCC  
TCAATGGGCTCTGCTTGAGCAAGGGCAACCCTGAGTGTGACGGGAAGGAGGACTGTAGCGACGGCTCAGATGAGA  
AGGACTGCGACTGTGGGTGCGGTCAATCAGGACAGGCTCGTGTGTTGGGGGCACGGATGCGGATGAGGGCG  
AGTGGCCCTGGCAGGTAAGCCTGCATGCTCTGGGCCAGGGCCACATCTGCGGTGCTTCCCTCATCTCTCCAACT  
GGCTGGTCTCTGCCGCACACTGCTACATCGATGACAGAGGATTGAGTACTCAGACCCACGCAGTGGACGGCCT  
TCCTGGGCTTGACGACACCAGAGCCAGCGCAGCGCCCCCTGGGGTGCAGGAGCGCAGGCTCAAGCGCATCATCTCCC  
ACCCCTTCTTCAATGACTTCACCTTCGACTATGACATCGCGCTGCTGGAGCTGGAGAAACCGGCAGAGTACAGCT  
CCATGGTGGGCCCCATCTGCCTGCCGGACGCCTCCCATGTCTTCCCTGCCGGCAAGGCCATCTGGGTACGGGGCT  
GGGGACACACCCAGTATGGAGGCACTGGCGCGCTGATCCTGCAAAAGGGTGAGATCCGCGTCATCAACCAGACCA  
CCTGCGAGAACCTCCTGCCGCAGCAGATCACGCCGCGCATGATGTGCGTGGGCTTCTCAGCGGCGGGCTGGACT  
CCTGCCAGGGTGATTCCGGGGGACCCCTGTCCAGCGTGGAGGCGGATGGGCGGATCTTCCAGGCCGGTGTGGTGA  
GCTGGGGAGACGGCTGCGCTCAGAGGAACAAGCCAGGCGTGTACACAAGGCTCCCTCTGTTTCGGGACTGGATCA  
AAGAGAACTGGGGTATTAGGGGCGGGGGCCACCCAAATGTGTACACCTGCGGGGGCCACCCATCGTCCACCCAG  
TGTGCACGCCTGCAGGCTGGAGACTGGACCGCTGACTGCACCAGCGCCCCCAGAACATACTGTGAACCTCAATC  
TCCAGGGCTCCAAATCTGCCTAGAAAACCTCTCGCTTCTCAGCCTCCAAAGTGAGCTGGGAGGTAGAAGGGGA  
GGACACTGGTGGTTCTACTGACCCAACTGGGGGCAAAGGTTTGAAGACACAGCCTCCCCGCCAGCCCCAAGCTG  
GGCCGAGGCGCGTTTGTGTATATCTGCCTCCCTGTCTGTAAGGAGCAGCGGGAACGGAGCTTCGGAGCCTCCTC  
AGTGAAGGTGGTGGGGCTGCCGGATCTGGGCTGTGGGGCCCTTGGGCCACGCTCTTGAGGAAGCCCAGGCTCGGA  
GGACCTTGAAAACAGACGGGTCTGAGACTGAAATTGTTTTTACCAGCTCCCAGGGTGGACTTCAGTGTGTGTATT  
TGTGTAAATGAGTAAAACATTTTATTTCTTTTTTAAAAA

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**FIGURE 428**

MGSDRARKGGGGPKDFGAGLKYNRSRHEKVNGLEEGVEFLPVNNVKKVEKHGPGRWVVLAAVLIGLLLVLLGIGFL  
VWHLQYRDVRVQKVFNQYMRITNENFVDAYENSNSTEFVSLASKVKDALKLLYSGVPFLGPYHKESAVTAFSEGS  
VIAYYWSEFSIPQHLVEEAERVMAEERVVMLPPRARSLKSFVVTSVVAFPTDSKTVQRTQDNNSCSFGLHARGVEL  
MRFTTPGFPDSPYPAHARCQWALRGDADSVLSLTFRSFDLASCDESGDLVTVYNTLSPMEPHALVQLCGTYPPS  
YNLTFHSSQNVLLITLITINTERRHPGFEATFFQLPRMSSCGGRLRKAQGTFNSPYYPGHYPNIDCTWNIEVPNN  
QHVKVRFKFFYLLEPGVPAGTCKPDYVEINGEKYCGERSQFVVTSSNSNKITVRFHSDQSYTDTGFLAEYLSYDSS  
DPCPGQFTCRTGRCIRKELRCDGWADCTDHSDELNCSCDAGHQFTCKNKFKPLFWVCDVNDGDNDEQGCSC  
PAQTFRCNSGKCLSKSQQCNGKDDCGDGSDEASCPKVNVTCTKHTYRCLNGLCLSKGNPECDGKEDCSDGSDEK  
DCDCGLRSFTRQARVVGTDADGEWFPQVSLHALGQGHICGASLISPNWLVSAAHCYIDDRGFRYSDPTQWTAF  
LGLHDQSQRSAPGVQERRLKRIISHPFFNDFTFDYDIALLELEKPAEYSSMVRPICLPDASHVFPAGKAIWVTGW  
GHTQYGGTGALILQKGEIRVINQTTNENLLPQQITPRMMCVGFLSGGVDSCQGDSSGGLSSVEADGRIFQAGVVS  
WGDGCAQRNKPGVYTRLPLFRDWIKENTGV

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**FIGURE 429**

TAGGAATTTCAAGGTGTAGGTCAGATATTTTGAGAATAGGGGATTTTTTTTGATGTGCCTTAAATTATACCAAAGAT  
TACTAATTATTCCCTCTTTGCCCAAATACTTGCATCCAAGGTTCTAGTCTCTGTTGCTGTGCTGGTCTTTAGCCC  
CACTGCTTGCAGTGAATGCCCTCCTTTTCACGGAGACCTATCTGAGGTACAGGATGGGGCTGGCACCAGATGATG  
TCCCACCACAGTCCCTCACCTCCGGCCTCCACATGACAGAACCAATTTACACTCAACCATGACCTCACCCCTCCT  
TGGTTTCTCCCTCGATCTGTGGCCCTTTTTGGATGTATTCTTATCTAACAACACAATCCGGAAAGACTGAATTGA  
ATATTTATACTAATGGTTCATATCCTTTATTGCTCAATGATCTAATTAAAGGGATCATTGCCACATTTTCATGTTT  
ATATTTCTACAATTTGTTTAGAAAACATCTCCTGACCATATCAGTAGCTCGTGTTATCTTTTTATCAACTGCTTC  
CCAGAGTCCTAAAACAATAGAAATTTTGGATTGAAAAGTTCAGCATAAGGAGTTTGAGTCAGTAAAGGATGGGAT  
AAAGGAGTCGAGATGATTCAATGAAAAGTATCACAAAAAGAGATTGATCAACAAGAGAAATAAAAAAGCCCAAG  
AGGAAGTGGTAGGGGAAGGAATTTAAGAACAGCAATAAGTAAACTCTTAAGTAACTCCAAAAAGAAAATGGTAC  
ATTTTGCCAAAGACCACTTATACTTGAGAACATGGAAGAATTTGCCTGATACTCTCTTTGGGGAAAAAGAGTCTCT  
CCTCTTTTCTCAAACCCCAGTACACTCAGCCTCTCTGCCCCACCTTCTCCTGACTTTGTCTCACTTGCTTCTG  
CAGTACATTGGAACCTGAATTGAAAGAAAGTCTTCCTTGAATAATTGGAGTTTGTCTTGAGAGGCAAAATATAGCC  
CCAAGAATCACAAAGATTCGAGGACCATGTAGGTCTTTTACGTAGCCCAATCCATAAAATTAGTCTCACTTTTTGT  
ATTTATCGTTTCATATTAAACCCTCTATATCAAATGTTTCATCATGATTTTGTATGATTTTTATAACTATTTTATT  
CATTTTATTAGATTTATTCTAAAATTTTTTAATGGTAAATTCTTAAACTGTGGAACCACTGAAGGTGCTTATTA  
ACTGTTCTCCCAGATTTGTACAAGTATTGGATGATTCCTTGAGTTTACAGCTGTACAAATAGTGTGGAATAAA  
CTTTTTTTAAAAAGA

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**FIGURE 430**

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**FIGURE 431**

CTGACTTGGCAGGACTGTGCAATTGTCAGAAGGCCGTGGGGAGTGGGGGCCAGTGCCTGCAGCCTGCCCTGCCTC  
TCTCACAGGCCCTTAGAGCATCGCCAGGTGCAGAGCTCCACAGCTCTCTTTCCCAAGGAGTAATCAGAGGGTGAG  
AACGTGGAGCCTGGTGGACAGGTGAAAGCACTGGGATCTTTCTGCCAGAAAGGGGAAAGTTGCACATTTATATC  
CTAGAGGGAAGCGACAGCAGTGTCTTCTCCCTGTGCTGAGGTACAGGAGCC**ATGT**GGCTAGAAATCCTCCTCACTT  
CAGTGTCTGGGCTTTGCCATCTACTGGTTCATCTCCCGGGACAAAGAGGAAACTTTGCCACTTGAAGATGGGTGGT  
GGGGGCCAGGCACGAGGTCCGCAGCCAGGGAGGACGACAGCATCCGCCCTTTCAAGGTGGAAACGTCAGATGAGG  
AGATCCACGACTTACACCAGAGGATCGATAAGTTCCGTTTCACCCACCTTTGGAGGACAGCTGCTTCCACTATG  
GCTTCAACTCCAACCTACCTGAAGAAAGTCATCTCCTACTGGCGGAATGAATTTGACTGGAAGAAGCAGGTGGAGA  
TTCTCAACAGATAACCCTCACTTCAAGACTAAGATTGAAGGGCTGGACATCCACTTCATCCACGTGAAGCCCCCCC  
AGCTGCCCCGAGGCCATAACCCGAAGCCCTTGCTGATGGTGCACGGCTGGCCCGGCTCTTTCTACGAGTTTTATA  
AGATCATCCCACTCCTGACTGACCCCAAGAACCATGGCCTGAGCGATGAGCACGTTTTTGAAGTCATCTGCCCTT  
CCATCCCTGGCTATGGCTTCTCAGAGGCATCCTCCAAGAAGGGGTTCAACTCGGTGGCCACCGCCAGGATCTTTT  
ACAAGCTGATGCTGCGGCTGGGCTTCCAGGAATTCTACATTCAAGGAGGGGACTGGGGGTCCCTGATCTGCACTA  
ATATGGCCCAGCTGGTGGCCAGCCACGTGAAAGGCCTGCACCTGAACATGGCTTTGGTTTTAAGCAACTTCTCTA  
CCCTGACCCTCCTCCTGGGACAGCGTTTCGGGAGGTTTCTTGCCCTCACTGAGAGGGATGTGGAGCTGCTGTACC  
CCGTCAAGGAGAAGGTATTCTACAGCCTGATGAGGGAGAGCGGCTACATGCACATCCAGTGCACCAAGCCTGACA  
CCGTAGGCTCTGCTCTGAATGACTCTCCTGTGGGTCTGGCTGCCTATATTCTAGAGAAGTTTTCCACCTGGACCA  
ATACGGAAATTCGATACCTGGAGGATGGAGGCCTGGAAAGGAAGTTCTCCCTGGACGACCTGCTGACCAACGTCA  
TGCTCTACTGGACAACAGGCACCATCATCTCCTCCCAGCGTTCTACAAGGAGAACCTGGGACAGGGCTGGATGA  
CCCAGAAGCATGAGCGGATGAAGGTCTATGTGCCCACTGGCTTCTCTGCCTTCCCTTTTGAGCTATTGCACACGC  
CTGAAAAGTGGGTGAGGTTCAAGTACCCAAAGCTCATCTCCTATTCTACATGGTTTCGTGGGGGCCACTTTGCGG  
CCTTTGAGGAGCCGGAGCTGCTCGCCAGGACATCCGCAAGTTCTTCTGTCGGTGTGGAGCGGCA**TGA**CCCAACC  
CTCTCCCCCGCCTGCCACCTCCCCCACAAGTGCCCTCCAGGCTTTTCTTGGGGAAGATAACCCCTTTTCTGAGG  
AATGAGTTTGCTCCGTCCCCTGCCCATGCTGGGAGCCACGCTCACCCCTCACCCCTCCAAGCTCACTCCCCA  
ACCCCCAACTCCGTGTGGTAAGCAACATGGCTTTGATGATAAACGACTTTACTCTA

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**FIGURE 432**

MWLEILLTSVLGFAIYWFISRDKEETLPLEDGWWGPGTRSAAREDDSI  
RPFKVVETSDEEIHDLHQRIDKFRFTPP  
LEDSCFHYGFNSNYLKKVISYWRNEFDWKKQVEILNRYPHFKTKIEGLDI  
HFIHVKKPPQLPAGHTPKPLLMVHGW  
PGSFYEFYKIIPLLTDPKNHGLSDEHVFEVICPSIPGYGFSEASSKKGFNS  
VATARIFYKLMLRLGFGQEFYIQGG  
DWGSLICTNMAQLVP SHVKGLHLNMAVLVLSNFSLTLLLLGQRFGRFLGL  
TERDVELLYPVKEKVFYSLMRESGYM  
HIQCTKPD TVGSALNDSPVGLAAYILEKFSTWTNTEFRYLEDGGLERKF  
SLDDLLTNVM LYWTTGTIISSQRFYK  
ENLGQGWM TQKHERMKVYVPTGFSAFPPELLHTPEKWVRFKYPKLISY  
SYMVRGGHFAAFEEPELLAQDIRKFLS  
VLERQ

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**FIGURE 433**

CGGCACGAGCGCCGCCGAGGATTTCAGCAGCCTCCCCCTTGAGCCCCCTCGCTTCCCGACGTTCCGTTCCCCCTG  
CCCGCCTTCTCCCGCCACCGCCGCCGCCGCTTCCGCAGGCCGTTTCCACCGAGGAAAAGGAATCGTATCGT**ATG**

TCCGCTATCCAGAACCTCCACTCTTTTCGACCCCTTTGCTGATGCAAGTAAGGGTGATGACCTGCTTCCTGCTGGC  
ACTGAGGATTATATCCATATAAGAATTCAACAGAGAAACGGCAGGAAGACCCTTACTACTGTCCAAGGGATCGCT  
GATGATTACGATAAAAAGAACTAGTGAAGGCGTTTAAGAAAAAGTTTGCCTGCAATGGTACTGTAATTGAGCAT  
CCGGAATATGGAGAAGTAATTCAGCTACAGGGTGACCAACGCAAGAACATATGCCAGTTCCTCGTAGAGATTGGA  
CTGGCTAAGGACGATCAGCTGAAGGTTTCATGGGTTT**TAA**GTGCTTGTGGCTCACTGAAGCTTAAGTGAGGATTTT  
CTTGCAATGAGTAGAATTTCCCTTCTCTCCCTTGTTCACAGGTTTAAAAACCTCACAGCTTGTATAATGTAACCAT  
TTGGGGTCCGCTTTTAACTTGGACTAGTGTAACCTCCTTCATGCAATAAACTGAAAAGAGCCATGCTGTCTAGTCT  
TGAAGTCCCTCATTTAAACAGAGGTCAAGCAATAGGCGCCTGGCAGTGTCAAGCCTGAAACCAAGCAATACCGTC  
ATGTTTCAGCCAAGCCCAGAGCCCTAAGATTACAAACAACCTATGGCCGGAACCTCCTCAGCTCTCCCTCTGCAGA  
GTTCCCTACCCTAAGAGAATGTTACCACCTGAACAGTCTCCTCGGTGAATCTGAGAGGAGAGGATGGGGTAAGGCAG  
AAGCACCAGCTGTACTACTAGAAGGGAGCTTTTGGTGGTAGATCCCCTGGTGTCTCCAACCTGACTAGGTGGACA  
GAGCTCAAAGAGGCCCTCTTACCGCTAGCGAGGTGATAGGACATCTGGCTTGCCACAAAGGTCTGTTTCGACCAGA  
CATATCCTAGCTAAGGGATGTCCAAACATCAGAATGTGAGGCCAACCTTCTATCAGAGTTAACTTTTGACAAGG  
GAACAAATCTCAAACCTGATCCATCAGTCATGTAGCTAGCTGTAGAGCTTGCAACTTAATAGCAGCAGCTGCCCAA  
TGCCATGTGAAGTAACAACTGGTTTTTGGTTTTTTTTTCCCCTTCAGTTTTTAATGTTATGTGTAATGTATTTAA  
ACCCTTATTTAAATAAACTTGTTTTTCAGAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 434**

MSAIQNLHSFDPFADASKGDDLLPAGTEDYIHIRIQQRNGRKTLLTVQGIADDYDKKKLVKAFKKKFACNGTVIE  
HPEYGEVIQLQGDQRKNICQFLVEIGLAKDDQLKVHGF



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**FIGURE 435A**

GAGGAAGCGATTCTGGGGTTTTCTGTGTTGAACGGTTCTTGTCCGCGAAGATGCGCTTCGGCCTCTGTCAGGGGAC  
TTGAACGGGCTTAGTGGGCTTCAGCCAGCTTTTCTCCACCGGTTCCCCACGGGGACCCCCCCCCCGGCCGTTG  
CAATGCGGGCGTGGGGCCGGGGGCTACGCGCGGAGTTCGTGCCACCGCCAGAGTGCCCCGTCTTTGAGCCGA  
GTTGGGAGGAGTTCACAGATCCGCTCAGCTTTATCGGCCGCATCCGGCCTTTGGCGGAGAAAACCGGCATCTGCA  
AAATTCGGCCGCCAAGGACTGGCAGCCTCCATTTGCCTGTGAAGTAAAAAGCTTTTCGTTTCACTCCAAGAGTCC  
AGCGCCTGAATGAACCTTGAGGCAATGACCAGAGTGAGATTGGATTCTTGATCAACTAGCAAAATTTTGGGAAC  
TTCAAGGATCTACTCTGAAGATCCCTGTGGTAGAGAGAAAAATCCTGGATCTGTATGCTTTGAGCAAGATTGTTG  
CCAGCAAAGGAGGTTTTGAAATGGTCACCAAAGAGAAGAAATGGTCTAAAGTGGGTAGTCGCTTGGGATATCTGC  
CAGGAAAAGGAAGTGGTCTCTTTTGAAGTCACATTATGAAAGAATTCTCTACCCATATGAGCTTTTCCAGTCTG  
GTGTGAGCCTTATGGGTGTGCAGATGCCTAATTTAGATCTTAAAGAAAAAGTGGAGCCTGAGGTTCTCAGCACTG  
ATACCCAAACTTCCCCAGAGCCAGGCACAAGGATGAACATTCTGCCGAAGAGAACAAGACGTGTGAAGACTCAGT  
CAGAATCTGGAGATGTGAGTAGAAACACGGAAGTGAAGAACTTCAGATTTTGGGGCTGGGCCCCAAGGTTGTGG  
GCTTGGCAATGGGAACAAAAGATAAAGAAGATGAGGTCACCCGAAGACGAAAAGTTACCAACAGGTCAGACGCAT  
TTAACAATGCAAATGAGACAACGGAAGGCACTCTCTCTGTTAACTTTGTTGATCTCTATGTTTGTATGTTTTGTG  
GTCGGGGGAAACAATGAAGATAAATTGCTTTTGTGTGATGGATGTGATGACAGCTATCATACATTTTGTCTAATTC  
CTCCACTACCTGATGTGCCCAAAGGAGACTGGAGGTGTCTAAATGTGTGCGCGAGGAATGTAGCAAACCTCGAG  
AAGCCTTTGGATTTGAACAAGCTGTACGAGAGTATACACTTCAGAGCTTTGGAGAGATGGCAGATAATTTAAGT  
CTGATTATTTTAATATGCCAGTCCATATGTTCCACAGAACTAGTAGAAAAGGAATTTTGGCGGCTGGTAAGCA  
GCATTGAAGAAGATGTTATTGTGGAATATGGAGCAGATATCTCCTCAAAGACTTTGGAAGTGGATTTCGGTGA  
AGGATGGGCGGAGAAAGATTCTGCCAGAAGAAGAGGAATATGCACCTTCTGGTTGGAATTTGAATAACATGCCTG  
TCCTGGAACAGTCTGTTCTTGACATATTAATGTGGACATCTCTGGTATGAAAGTGCCGTGGCTCTATGTGGGAA  
TGTGCTTCTCTTTTGTGCTGGCACATTGAGGATCACTGGAGTTATTCATCAACTACTTGCCTGGGGGGAGC  
CAAAGACATGGTATGGTGTGCCATCTCATGCTGCAGAGCAACTGGAGGAGGTGATGAGAGAGCTGGCCCCGAGT  
TATTTGAATCCCAGCCTGATCTTCTGCATCAGTTAGTTACCATCATGAACCCCAACGTGCTAATGGAGCATGGTG  
TGCTGTGTACAGGACCAATCAGTGTGCTGGCGAGTTTGTGTGACATTTCTCGTGCCTATCACTCTGGATTTA  
ACCAGGGCTACAACTTTGTGTAAGCTGTGAACCTCTGTACTGCTGACTGGTTGCCCATTTGGACGTCAATGTGTAA  
ATCATTACCGACGCCTAAGGCGCCACTGTGTCTTTTACACGAGGAACTAATTTTCAAGATGGCAGCAGATCCAG  
AATGCTTAGATGTGGGGCTGGCTGCCATGGTCTGCAAAGAATTGACTCTCATGACTGAAGAAGAAACACGATTAA  
GAGAGTCTGTTGTACAGATGGGTGTCTGTATGTGAGAAGAAGTGTGTAAGTGTGTTTCTGATGATGAGCGGC  
AGTGTTCAGCATGCAGAACCACATGTTTTCTCTCTGCTCTCACATGTTCTGTATCCTGAGCGGCTTGTATGTC  
TCTACCATCCAACCTGATCTGTGCCCCCTGCCCCATGCAGAAAGAAATGTCTTAGATATCGCTACCCATTAGAAGACC  
TCCCTTCTCTGCTATATGGTGTAAAAGTCAGGGCACAGTCTTATGACACTTGGGTGAGTCTGTTACAGAAGCAT  
TGTCTGCTAACTTCAACCACAAAAAGATTTGATTGAATTGCGAGTAATGCTGGAAGATGCTGAGGATAGGAAAT  
ACCCAGAGAATGATCTCTTTGAAAACCTCAGGGATGCTGTAAAAGAAGCTGAGACCTGTGCTTCTGTGGCTCAGC  
TGCTTCTGAGCAAAAAGCAGAAACACAGACAGAGCCCAGATAGTGGGAGGACTCGGACCAAACCTGACAGTGAAG  
AATTGAAGGCCTTTGTCCAACAACTTTTTAGTCTTCCGTGTGTCTATCAGCCAAGCTCGGCAAGTAAAGAATCTGC  
TAGATGATGTGGAAGAGTTTCATGAACGTGCTCAGGAGGCCATGATGGATGAAACCCAGATTCTTCCAAACTCC  
AGATGTTGATAGATATGGGCTCTAGTCTCTATGTGGAACCTCCCTGAATTACCACGACTGAAGCAAGAGCTACAAC  
AGGCTCGGTGGTTGGACGAAGTAAGACTGACCTTATCAGATCCGCAACAAGTCACCTTGGATGTCTATGAAGAAGC  
TGATAGACTCTGGGGTAGGGTTGGCACCCACCATGCTGTGGAGAAAGCAATGGCTGAACCTACAGGAGCTCCTTA  
CAGTCTCTGAACGATGGGAAGAAAAGGCTAAGGTCTGCCTACAGGCAAGACCGAGGCACAGTGTGGCAAGTTTAG  
AAAGCATTGTGAATGAAGCCAAGAACATTCCAGCCTTTCTACCCAATGTGTTGCTTGAAGAAGCCTTACAAA  
AGGCTCGAGAATGGACCGCTAAAGTGAAGCTATTAGAGTGGCAGCAATTACGCTTATTTGGAGCAGCTTGAGA  
GCTTGTCTGCGAAAGGACGCCCTATTCTGTGCTCTTGAAGCACTGCCGCAAGTGAATCACAGGTAGCAGCAG  
CACGGGCATGGAGAGAACGACTGGGCGGACGTTTCTTAAGAAGAATTCTAGCCATACATTGTTACAGGTGCTGA  
GCCCCCGGACCGACATTGGTGTATATGGGAGTGGCAAAAATAGGAGGAAAAAGTAAAAGAATAATAGAAAAAG  
AAAAAGAAAAGGATCTGGACCTGGAGCCTCTGAGTGATCTGGAGGAAGGATTGGAGGAAACCAGAGATACAGCCA  
TGGTGGTGGCAGTTTTCAAAGAACGGGAGCAAAAAGAGATTGAAGCCATGCATTCTCTCAGAGCAGCCAACCTAG

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**FIGURE 435B**

CCAAGATGACAATGGTGGACCGCATAGAAGAAGTAAAAATTTTGCATTGCGCGAAGACAGCCAGTGGGTTTATGC  
TACAGTGTGAGCTCTGCAAAGACTGGTTCCATAACAGCTGTGTTCCCTCTTCCTAAATCAAGTTCCCAAAAAAAG  
GATCCAGCTGGCAAGCTAAAGAAGTAAATTCCTTTGCCCTCTTTGTATGCGGTCTCGAAGGCCAGGCTAGAGA  
CTATTCTGTCTACTCCTGGTATCCCTTCAGAAGTTGCCCGTACGGTTGCCTGAAGGAGAGGCCCTGCAGTGTTTGA  
CAGAACGTGCTATGAGTTGGCAAGATAGAGCGCGGCAGGCTCTAGCCACAGATGAACTATCCTCTGCCCTGGCCA  
AACTATCTGTGTTGAGCCAGCGTATGGTGGAAACAGGCGGCTCGAGAAAAAACTGAAAAGATCATCAGTGCAGAAC  
TCCAAAAAGCAGCTGCCAATCCAGACTTACAGGGACACTTACCTAGTTTCCAGCAGTCTGCTTTTAAACCGGGTGG  
TGAGCAGTGTGTCATCTTCTCCTCGACAAACAATGGACTATGATGATGAAGAAACAGACTCTGATGAAGACATTC  
GAGAGACATATGGCTACGACATGAAGGACACAGCCAGTGTGAAGTCCTCTAGTAGTCTTGAACCCAATCTTTTTT  
GTGATGAAGAGATTCCCATCAAATCCGAGGAGGTGGTGACCCACATGTGGACAGCACCTTCATTTTGTGCAGAGC  
ATGCTTATTCTTCTGCTTCTAAGAGTTGTTCTCAAGTATTTTTTGGGAAAGGTTCTAGCACCCCAAGGAAACAAC  
CTCGGAAGAGCCCTTTGGTGCCCGAAGTTTGGAACTCCAGTGTGGAGTTGTCACCTGGAGCTAAGGCACAAC  
TGGAAGAACTTATGATGGTTGGAGATCTCCTGGAAGTATCTCTGGACGAGACTCAACACATATGGCGGATTTTGC  
AGGCCACACACCCACCCTCTGAAGACAGATTCTTGCAATCATGGAGGATGACAGCATGGAAGAGAAACCACTAA  
AAGTGAAAGGAAAGGACTCTTCAGAGAAGAAACGGAACGGAAGCTAGAAAAGGTAGAGCAACTTTTTTGGAGAAG  
GAAAAACAGAACTCCAAGGAGTTAAAGAAAATGGACAAACCTAGAAAGAAGAAATTTAAATTAGGTGCAGACAAAT  
CAAAGAAGCTGAATAAACTGGCCAAGAACTAGCAAAAAGAAGAGAGAAAAGAAAAGAGGAGAAGGCTGCTG  
CAGCCAAAAGTTGAACTTGTGAAAGAGAGCACTGAAAAGAAAAGAGAGAAAAGGTGCTGGACATCCCTCAAAGT  
ATGACTGGTCAGGAGCAGAGGAGTCTGATGATGAGAATGCTGTGTGCGCAGAACCAGACTGCCAAAGGCCCTGCA  
AGGACAAGGGAGTTGTATTTGTAACGAAGAAGAGAGAGATAAAAAATATTAGTTTTTAAAGTGTCTATGTGACT  
GCTTTTCTAAAAAGGTAGACTGGGTACAATGTGATGGTGGCTGTGATGAGTGGTTTTCATCGGGTTTGTGTGGGTG  
TATCTCCAGAAAATGGCTGAAAATGAAGATTACATCTGTATAAACTGTGCAAAGAAGCAGGGGCCAGTTAGCCAG  
GTCCAGCACCACTCCTTCCTTCATAATGAGCTACAACTACCAATGGAGGATCTTAAAGAGACCAGTTAGCAGA  
TGCTTGGTTAGTTTGGGACATGGGGGACATGGACCACATTGAGACCTTAGTCATCAAGTAGAGTGGTTTATATC  
ACTTGGAAATGTTGCTTCTAAAGATGAATGGCCTTCAGAGAAAGTCCCCTTAGTGCTGGCTTCCTCTTTGCATGGA  
CTCTGTGGGTTACATTGCTCTATCAACATATCTATGCAGAGGGTGTCTTCTTTGGTACAACAGCCAATATCTCAT  
GTCTCCTTTGAGTGTGGTTTACTGCATTAAGGCCAGATGCTTAATTGAGCTCTAGGGTGGCTGGTTAGTATTAAT  
ACATTGGTGTGCTAACAGGGCATATAGGATGTGGCTTTTGTCCAGCTGATAGTAGTTAGAGGCTTACAACCTTAGG  
AGCAGCACCAACTGAAGGTGCTAATTGCTTGGATCTCCTTCATTAGGATAGTTGGAGAGGGATTGGAGTACCACT  
TTCTTCCACTGTTACCAGGTACTTAATGCCCTAAAGATACAACCTAGGAGTAACAGGGCCAAAGTTATTTCTGTTA  
GACGTCAAGGAATGGTATCACAGTCTATTGACCTCAGCGATTTGTGCTTGTGCTAGAGAAGAACATCCCAAT  
AGGAGAACCTCTCACAAGCTGGGGCAGGTCACCTTATCTTTGTAAGATGAGGATATCATCTAGATCAGAAATCTG  
ACTAGATTGGATTCTGAGGAGAAGAACCTACTACAAGGCAAGGAGCCGTTTTTTGGCTTTGAAAAGTCTTGCTGT  
CTTGGGTCTACATTTTAGGGAAGAGCAGGTACATGGATCCAGGCTTCTGCCAAAAAAGAGAAGAAGATGA  
CGAGTATGACCAGTCGTACTATCTTACTGAGCCACAGTGATGCATGCTTTTCGGGGAAAACCTTATTACAAAGTA  
TTCCAGACACCAGGCTTCAGGCATGGCCATGAGCAAGACCAGCAAAATAACAGCTTTTTCCCTTGACGCCCTGACC  
CCAATGTCTGCTGTTTCCAACACTGGTGATTTCTAACTACGGCCCACAGCAGATGCTGTTGAATAACACCATGGC  
TTCATCAGAGGATGTGGGGTTGTAGTACCTCTGGGTGATGAAGTTGTTTTAGCAAATCCATTTTTAAAAA  
AAAAA

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**FIGURE 436**

MAGVGPGGYAAEFVPPPECPVFEPSSWEFTDPLSFIGRIRPLAECTGICKIRPPKDWQPPFFACEVKSFRFTPRVQ  
RLNELEAMTRVRLDFLDQLAKFWELQGSTLKIPVVERKILDLYALSKIVASKGGFEMVTKEKKWSKVGSRLGYLP  
GKGTGSLKSHYERILYPYELFQSGVSLMGVQMPNLDLKEKVEPEVLSTDQTSTPEPGTRMNILPKRTRRVKTQS  
ESGDVSRNTELKKLQIFGAGPKVVGLAMGTDKEDVTRRRKVTNRSDAFNMQMRQRKGTLSVNFVDLYVCMFCG  
RGNNEDKLLLCDGCDSDSYHTFCLIPPLPDVFPKGDWRCPKCVAEECSKPREAFGFEQAVREYTLQSFGEADNFKS  
DYFNMPVHMPVTELVEKEFWRLVSSIEEDVIVEYGADISSKDFGSGFPVKDGRRKILPEEEYALSGWNLNNMPV  
LEQSVLAHINVDISGMKVPWLYVGMCFSSFCWHIEDHWSYSINYLHWGEPKTYGVPSHAAEQLEEVMMRELAPEL  
FESQPDLLHQLVTIMNPNVLMHGVPPYRTNQCAGEFVVTFFPRAYHSGFNQGYNFAEAVNFTADWLPIGRQCVN  
HYRRLRRHCVFSHEELIFKMAADPECLDVGLAAMVCKELTLMTEETRLRESVVQMGVLMSEEEVFELVPDDERQ  
CSACRTTCFLSALTCSNPERLVCLYHPTDLCPCPMQKKCLRYRYPLEDLPSLLYGVKVRAQSYDTWVSRVTEAL  
SANFNHKKDLIELRVMLEDAEDRKYPENDLFRKLRLDAVKEAETCASVAQLLLSKKQKHRQSPDSGRTRTKLTVEE  
LKAFVQQLFSLPCVISQARQVKNLLDDVEEFHERAQEAMMDETPDSSKLQMLIDMGSSLYVELPELPRLKQELQQ  
ARWLDEVRLTSLDPQQVTLDMVKKLIDSGVGLAPHHAVEKAMAELQELLTVSERWEEKAKVCLQARPRHSVASLE  
SIVNEAKNIPAFLPNVLSLKEALQKAREWTAKVEAIQSGSNYAYLEQLESLSAKGRPIPVRLAALPQVESQVAAA  
RAWRERTGRTFLKKNSSHTLLQVLSPRTDIGVYGSGKNRRKKVKELIEKEKEKDLDLEPLSDLEEGLEETRD TAM  
VVAVFKEREQKEIEMHSLRAANLAKMTMVDRIEEVKFCICRKTASGFMLQCELCKDWFHNSCVPLPKSSSQKKG  
SSWQAKEVKFLCPLCMRSRRRPLETILSLLVSLQKLPVRLPEGEALQCLTERAMSWQDRARQALATDELSSALAK  
LSVLSQRMVEQAAREKTEKII SAELQKAAANPDLQGHLP SFQQSAFN RVSSVSSSPRQTM DYDEETDSD EDIR  
ETYGYDMKDTASVKSSSSLEPNLFCDEEIP IKSEEVVTHMWTAP SFCAEHAYSSASKSCSQVFFGKGSSTPRKQP  
RKSP LVPRSLEPPVLELSPGAKAQLEELMMVGD LLEVSLDETQHIWRILQATHPP SEDRFLHIMEDDSME EKPLK  
VKGKDSSEKKRKRKLEKVEQLFGEGKQKSKELKKMDKPRKKKLKLGADKSKKLNKLAKKLAKKEEERKKKKEKAAA  
AKVELVKESTEKKREKKVLDIPSKYDWSGAEESDDENAVCAEPDCQRPCDKGVVFTKKREIKNISFKSVLDC  
FSKKVDWVQCDGGCDEWFHRVCVGVSPEMAENEDYICINCAKKQGPVSPGPAPPPSFIMSYKLPMEDLKETS

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**FIGURE 437A**

GAAGCGGCGGGCGGGGTGGAGCAGCCAGCTGGGTCCGGGGAGCGCCGCCGCCCTCGATGGGGTGTTGAAAAGT  
CTCCTCTAGAGCTTTTGAAGGCTGAATGCACTAAACATGAAGAGCTTGAAAGCGAAGTTCAGGAAGAGTGACACC  
AATGAGTGGAACAAGAATGATGACCGGCTACTGCAGGCCGTGGAGAATGGAGATGCGGAGAAGGTGGCCTCACTG  
CTCGGCAAGAAGGGGGCCAGTGCCACCAACACGACAGTGAGGGCAAGACCGCTTTCATCTTGCTGCTGCAAAA  
GGACACGTGGAATGCCTCAGGGTCATGATTACACATGGTGTGGATGTGACAGCCCAAGATACTACCGGACACAGC  
GCCTTACATCTCGCAGCCAAGAACAGCCACCATGAATGCATCAGGAGGCTGCTTCAGTCTAAATGCCAGCCGAA  
AGTGTGCAGAGCTCTGGGAAAACAGCTTTACATTATGCAGCGGCTCAGGGCTGCCTTCAAGCTGTGCAGATTCTC  
TGCGAACACAAGAGCCCCATAAACCTCAAAGATTTGGATGGGAATATACCGCTGCTTCTTGCTGTACAAAATGGT  
CACAGTGAGATCTGTCACTTCTCCTGGATCATGGAGCAGATGTCAATTCCAGGAACAAAAGTGAAGAAGTGTCT  
CTCATGCTGGCCTGTGAGATTGGCAGCTCTAACGCTGTGGAAGCCTTAATTAAAAAGGGTGCAGACCTAAACCTT  
GTAGATTCTCTTGATACAATGCCTTACATTATTCCAACTCTCAGAAAATGCAGGAATTCAAAGCCTTCTATTA  
TCAAAAATCTCTCAGGATGTGATTTAAAGACCCCCAACAAAACCAAAGCAGCATGACCAAGTCTCTAAAATAAGC  
TCAGAAAGAAGTGAAGTCCAAAAACACGCAAAGCTCCACCACCTCCTATCAGTCCTACCCAGTTGAGTGATGTC  
TCTTCCCCAAGATCAATAACTTCGACTCCACTATCGGGAAAGGAATCGGTATTTTTTGCTGAACCACCCTTCAAG  
GCTGAGATCAGTTCTATACGAGAAAACAAAGACAGACTAAGTGACAGTACTACAGGTGCTGATAGCTTATTGGAT  
ATAAGTTCTGAAGCTGACCAACAAGATCTTCTCTCTATTGCAAGCAAAAAGTTGCTTCCCTTACCTTACACAAT  
AAGGAGTTACAAGATAAATTACAGGCCAAATCACCCAAGGAGGCGGAAGCAGACCTAAGCTTTGACTCATACCAT  
TCCACCCAAACTGACTTGGGGCCATCCCTGGGAAAACCTGGTGAAACCTCTCCCCCAGACTCCAAATCATCTCCA  
TCTGTCTTAATACATTCTTTAGGTAAATCCACTACTGACAATGATGTCAGAATTCAGCAACTGCAAGAGATTTTG  
CAAGATCTACAGAAGAGATTAGAGAGCTCTGAAGCAGAGAGAAAACAGCTACAGGTGCAACTCCAATCCCGAAGG  
GCAGAACTGGTATGCTTAAACAACACTGAGATTTTCAGAGAACAGCTCTGACCTCAGCCAGAACTTAAAGAACT  
CAGAGCAAATACGAGGAGGCTATGAAAGAAGTCCTTAGTGTGAGAAGCAGATGAAACTCGGTCTTGCTCTCACCT  
GAAAGCATGGATAATTATTACATTTCCACGAGCTGAGGGTCACGGAAGAGGAAATAAATGTGCTAAAGCAGGAT  
CTGCAGAATGCATTAGAAGAAAGTGAAGAAATAAAGAGAAAGTGAGAGAGTTAGAGGAAAACTGGTAGAGAGG  
GAGAAAGGTACAGTGATTAAGCCACCTGTGGAAGAGTACGAGGAAATGAAAAGTTCATATTGCTCTGTTATTGAG  
AATATGAATAAGGAGAAAGCATTTTTGTTTGAGAAATACCAAGAAGCCCCAAGAAGAAATCATGAAATTTAAAGAC  
ACACTAAAAAGTCAGATGACACAGGAAGCCAGTGATGAAGCTGAGGACATGAAAGAAGCCATGAATAGGATGATA  
GATGAACTCAATAAACAGGTGAGCGAGCTGTACAGCTGTACAAAGAAGCCAGGCTGAGCTGGAGGATTACAGG  
AAGAGGAAATCTCTAGAGGATGTCACAGCTGAATATATCCATAAAGCAGAGCATGAGAACTGATGCAATTGACA  
AACGTGTCCAGGGCTAAAGCAGAAGATGCACTGTCTGAAATGAAGTCTCAGTATTCAAAAGTGTGAATGAGTTG  
ACCCAGCTCAAACAACCTGGTGGATGCACAAAAGAGAACTCTGTCTCTATCACAGAACATTGCAAGTGATAACC  
ACGCTGCGGACTGCAGCAAAAAGAGATGGAAGAAAAATAAGCAATCTTAAGGAACACCTTGCAAGCAAGGAAGTG  
GAAGTAGCAAAGCTGGAGAAACAACCTCTTAGAAGAGAAAGCTGCTATGACTGATGCAATGGTACCTCGGTCTTCC  
TATGAAAACTCCAGTCATCCTTAGAGAGTGAAGTGAGTGTGTTGGCATCGAAATTAAGGAATCTGTGAAAGAG  
AAAGAGAAGGTCCATTACAGAGGTTGTCCAGATTAGAAGTGAGGTCTCACAGGTGAAAAGAGAAAAGGAAAATATT  
CAGACTCTCTTGAAATCCAAAGAGCAAGAAGTAAATGAACCTTCTGCAAAAATTCAGCAAGCTCAGGAAGAAGT  
GCAGAAATGAAAAGATACGCTGAGAGCTCTTCAAACCTGGAGGAAGATAAAGATAAAAAGATAAATGAGATGTGCG  
AAGGAAGTCACCAAATTGAAGGAGGCTTGAACAGCCTCTCCAGCTCTCCTACTCAACAAGCTCATCCAAAAGG  
CAGAGTCAGCAGCTGGAGGCGCTGCAGCAGCAAGTCAAACAGCTCCAGAACCAGCTGGCGGAATGCAAGAAACAA  
CACCAGGAGGTCAATACAGTTTACAGAATGCATCTTCTGTATGCTGTGCAGGGCCAGATGGATGAAGATGTCCAG  
AAAGTACTGAAGCAAATCCTTACCATGTGTAAAAACCAGTCTCAAAAGAAGTAAAGTGGATTCTTGGCAGGACA  
CTGCCCCCTTGTCATCTGTCTTTGTGTTAGATCCAGAGTTGTGCGCAGCCGCTGCCATTGTTCTCATTCTGGTAT  
GCACTGTGGCCTAGCGTAGCTTCTTCCCTTTCCAAAGTTTCTGAGGACTTCTCCAGGAGAAGACTGCCCGCT  
CAGAACTGCTTAGAGACTTCAAACCAGCAGAGGTGAAAGTCCCTGTATCCCTTCAGATTCCAGAGCTGGGATCA  
GCCATGCCAGAGGTCTGGTCTGATGCTGGCAGGGGGGGCCCCCTCCTCCATCCCTGACTGGCTGAGTGGCTTTA  
TCACCACCGAGTGATGTGCTGAGGCCCTCTGCAGTGAATGCTCCTTCCATTCTGTACTCGGGCAGTGCCATTCA  
GCACAGGAGAGCTCTTTTTGCCTTTGGCTTTCAATTCCAAAACATGATTTAATTTCTAACTAAATTAGTATGGCA  
CTAGTTATGAAGTATCTGCTTAAAACCTTTCATCATGATATCCTGTGGATTTAAAAACTCTAATTCCATGTTTTTC

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**FIGURE 437B**

TTCCCATCTGCCTTATATATCTCATCACCCCTGCTTATCAATATTCAGTTTGATGAGCACTATTAATAAAATATG  
AAACTTAAAAACAAAAGCAAGTTGTCCTTAAAAGTTCTTTTTTTAAGTAAATTGTTGACATACTGCAAATTTTCT  
ATGCAAACTTGCCTCCTGCTGTTATCTGTGAAGCTCAGGAAATCCAAACATTTGTGTTTCAACAAGGGACAGTAA  
ACTGTGTGTTTACAGCCAAAAGAAATGCCTCATAGTTCTTAACCTCAACTTTTGTAGAAGTATTTTTTCTCTGT  
AATATTTTTATTGGCTCATAAAGATGTTTTCATATCTGAACTCCTAAATAAGTGAAATTACAGTAGATTATATTA  
ACAAAATACTTTTTAGGTAGCCATGCTTGAGACTTTTTAAAAATATAACTTTTTCTTAAAGTTTTTCAGCTATAG  
CAAAAGGTAGTTATGTATGCCAGACCTAATATGAGCTGCCACCAACACCCCTAGAACTTTTCAGCCATGGTGTCTT  
CAGAATTGTAGCGCATTTCTGAATCTAGCAAATCCTCCTTTTACCCGTTGAATGTTTTGAATGCCCTGACTCTAC  
CAGCGCCCATAAATGATCTCTAGAAGGACTGTTAGTACCAATCTGTTTTTCAACTTTGAAGCTAAAAACCCTGAT  
ATGGTAATATTATGGTGCATAGCAGAGGTCTCGGAAAAAAAAATTTCTGTTCACTTTACTTTTCAGGTTAAAAAT  
GTTTCTAACACGCTTGCAACTTCCCTTATGGCATTAACTCTGTTGAGGGAGAGAGACAGAATCCTGGACTCTCCA  
AAGTATTTAACTGAAAGTAGGGCCTGCTCTGACAGGGCCCATGTCCCACAAGGCTGCTTGGCCTCAGTGGGTGCT  
TGGCTGTGCTGGATGATATGTTGATCTGTATTGGATAAGGACCAATGACAGCAAAGCAAAAATGGCTTTAAAGCT  
TGGTGTACTTTTTCTTAAGTTGTTTAATTATAGTTAAGCAATTTCAAAAATGCTCCAAAGAAATGTGAAAGGACC  
TTTTGTCACAGCACTTCAGAAAATACACAACAGCCCCTTCTGCCCCCGCACAGAAATGCTGCAGAGTATATAAAA  
CTTGAGACATTTTTGTAGGATGCCTGACGAGGTGTAGCCTTTTATCTTGTTTCCGGATGCATATTTATTACGAGT  
ACTCTGGTTAAATATTGAAAAGTTATATGCTGTAGTTTTTAGTATTTTGTCTTTGTAATTTACAGAAGTTATTGG  
AGAAAATAAACTTGTTTCATTTTGCAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 438**

MKSLKAKFRKSDTNEWNKNDDRLLQAVENGDAEKVASLLGKKGASATKHDSEGKTA FHLLAAAKGHVECLRVMITH  
GVDVTAQD TTGHSALHLAAKNSHHECIRRLLOSKCPAESVDSSGKTALHYAAAQGCLQAVQILCEHKSPINLKDL  
DGNIPLLLAVQNGHSEICHFLLDHGADVNSRNKSGRTALMLACEIGSSNAVEALIKKGADLNLVDSLGYNALHYS  
KLSENAGIQSLLLSKISQDADLKTPTKPKQHDQVSKISSERSGTPKTRKAPPPPI SPTQLSDVSSPR SITSTPLS  
GKESVFFAEPPFKAEISSIRENKDR LSDSTTGADSLDISSEADQQDLLSLLQAKVASLTLHNKELQDKLQAKSP  
KEAEADLSFDSYHSTQTDLGPSLGKPGETSP PDSKSSPSVLIHSLGKSTTDNDVRIQQLOEILQDLQKRLESSEA  
ERKQLQVELQSRRAELVCLNNT EISENSSDLSQKLKETQSKYEEAMKEVLSVQKQMKLGLVSPESMDNYSHFHEL  
RVTEEEINVLKQDLQNALEESERNKEKVRELEEKLVEREKGTVIKPPVEEYEEKSSYCSVIENMNKEKAFLEK  
YQEAQEEIMKLKDTLKSQMTQEASDEAEDMKEAMNRMIDELNKQVSELSQLYKEAQAELEDYRKRKSLEDVTA EY  
IHKAHEKLMQLTNVSRKAEDALSEMKSQYSKVLNELTQLKQLVDAQKENSVSITEHLQVITTLRTAAKEMEEK  
ISNLKEHLASKEVEVAKLEKQLLEEKAAAMTDAMVPRSSYEKLQSSLESEVSVLASKLKESVKEKEKVHSEVVQIR  
SEVSQVKREKENIQ TLLKSKEQEVNELLQKFQQAQEELAEMKRYAESSKLEEDKDKKINEMSKEVTKLKEALNS  
LSQLSYSTSSSKRQSQQLEALQQQVKQLQNQLAECKKQHQEVISVYRMHLLYAVQGQMD EDVQKVLKQILTMCKN  
QSQKK

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**FIGURE 439A**

AGTGGGACTCAGCGGGCGTGGAGGTCGCGGCGGACGGAGCGAGCCCTGGGCGAGTGAATTGTGGCTGTGGGTTGA  
CGGTGGAGACACCCCCCGGAGAGGCGGAGGGAAGGGAGGCGAGGCTGCACCTGCATGCTTCCCGCCTCCCACTCC  
CCAGCGCCCCCGGACCGTGCAGTTCTCTGCAGGACCAGGCCATGGAGCTCGAAGTCCGGCGGGTCCGACAGGCGT  
TCCTGTCCGGCCGGTTCGCGACCTCTGCGGTTTCGGCTGCAGCAGCTGGAGGCCCTGCGGAGGATGGTGCAGGAGC  
GCGAGAAGGATATCCTGACGGCCATCGCCGCCGACCTGTGCAAGAGTGAATTCAATGTGTACAGTCAGGAAGTCA  
TTACTGTCCTTGGGGAAATTGATTTTATGCTTGAGAATCTTCCTGAATGGGTACTGCTAAACCAGTTAAGAAGA  
ACGTGCTCACCATGCTGGATGAGGCCTATATTAGCCACAGCCTCTGGGAGTGGTGTGATAATCGGAGCTTGGA  
ATTACCCCTTCGTTCTCACCATTAGCCACTGATAGGAGCCATCGCTGCAGGAAATGCTGTGATTATAAAGCCTT  
CTGAAGTGAAGTGAATAACAGCCAAGATCTTGGCAAAGCTTCTCCCTCAGTATTTAGACCAGGATCTCTATATTG  
TTATTAATGGTGGTGTGAGGAAACCACGGAGCTCCTGAAGCAGCGATTGACCACATTTTCTATACGGGAAACA  
CTGCGGTTGGCAAATTTGTCATGGAAGCTGCTGCCAAGCATCTGACCCCTGTGACTCTTGAAGTGGGAGGGAAAA  
GTCCATGTTATATTGATAAAGATTGTGACCTGGACATTGTTTGAGACGCATAACCTGGGGAAAATACATGAATT  
GTGGCCAAACCTGCATTGCACCCGACTATATTCTGTGAAGCATCCCTCCAAAATCAAATTGTATGGAAGATTA  
AGGAAACAGTGAAGGAATTTTATGGAGAAAATATAAAGAGTCTCCTGATTATGAAAGGATCATCAATCTTCGTC  
ATTTTAAAGAGGATACTAAGTTTGCTTGAAGGACAAAAGATAGCTTTTGGTGGGGAGACTGATGAGGCCACACGCT  
ACATAGCCCCAACAGTACTTACCGATGTTGATCCTAAAACCAAGGTGATGCAAGAAGAAATTTTGGACCAATTC  
TTCCAATAGTGCCTGTGAAAAATGTAGATGAGGCCATAAATTTTATAAATGAACGTGAAAAGCCTCTGGCTCTTT  
ATGTATTTTTCGCATAACCATAAGCTCATCAAACGGATGATTGATGAGACATCCAGTGGAGGTGTACAGGCAATG  
ACGTCAATTATGCACTTCACGCTCAACTCTTTCCATTGAGAGGAGTGGGTTCAGTGGGATGGGAGCTTATCACG  
GAAAACATAGTTTGTACTTTTCTCATCAGCGTCCCTGTTTATTAAGAGTAAAGAGAGAAGGTGCTAACA  
AACTCAGATATCCTCCCAACAGCCAGTCAAAGGTGGATTGGGGGAAATTTTCTCTTGAAACGGTTCAACAAAG  
AAAAACTCGGTCTCCTGTTGCTCACTTTTCTGGGTATTGTAGCCGCTGTGCTTGTCAAGGCAGAATATTACTGAA  
GAATGATCCTGTTCAACCTCCTAGTGCCTCTACTGAATTATTCCTCTTTTAAATGGTTAATGAACCAATAATTTT  
TAAATCATACCAAAAATAGTAAGAAAATATGCAACACTCTGTGATCAAACTTAAAGTCAATTGCCATTCATCAT  
TAATAAAAGTTGCCATTTCAACTACGTCCCAACATTCCCTAATAGGGTATTCAGGGAACCTGTCTTAAATTGTGC  
TTATCTAAATCTTGGAACCTTGAGCTAGGGGAGGAGAATGTATTAGACTAAATACAACTGCGGGGTGTGAAGGG  
AGTCTCAGAACCTCACTGAATCCTTCACTCCAGTTAATGGCACTGCTCACTTCTGCTGCTGCCACCATCAC  
TGTGTGAAGCTTTCAAGAGCTTGGTACTTCCAGGGCTACCGGCAGTCTCTGTAGTCCAGAGAGGTGAGATTAG  
ATCTTCTTGGTTCCCTGTGAGGTTTCAAGGCACTAAACTCTATGTGGGAAGGGAGGGGTACTCCTCCTCCAAT  
GGGACTCAAGGACTTGACCTCCAGGAGTAGGCCCCGTGGTCAAGTGGCATCTCACCAGTGGTCTTCATTCTTCC  
TCATTCACTCTTTATCATCTCTGTGTTCTGTGTTAGTTGCAACAATCTCTTGTGACTAATGTCACCTCAAAGCATCTT  
GTAACCTAGGGCTTCTCGGAAGTTAGTTGCCAAAGTCATGCAAGCATCACCTGTCATTCTTGTGTTGGAGTTATA  
GAATTCTACATCTTATAAAACCTAACTGGCATTATAAAAAATACTGTGGCCGGGCGTGGTGGCTCATGCCTGTAAT  
CCCAGCACTTTGGGAGGCCGAGGTGGGAGGATTGCTTGAGTCCAGGAATTTGAGACCAGCCTGGACAACACAGTG  
AGACCTCATCTCTATCAAAAAATAAAATTAGCTAGATGTGGTGGCATGAGCCTGTGTTCCAGCTGCTTAGGAG  
GCTGAAGCAGGAGGATTGATTGAGCCTGCGAGGCCAAGGCTGCAGCAGGCTGTGATTGCACCACTGCACCTCAGC  
TTGGGCAACAGAGCAAGACCCTGTCTCCGAAACAAATAAAAAATACTGTAATAAAAGTACTTATAAACATACTAA  
TCCTCTTTTCAGGACCCTAAAGTTGCAGGTTAGTAGGTCTTCAAGGACAAATCTGTAAGTTTCTTTTCTGTAGTGC  
AAGTAAATTTTCACTTTTTGAAACTATAGAGAGATCCCTTTCTGATTAGCCTACAGAACTTAAAGTGAGGGAACC  
ATTTCTCTCACAGACAAAGAGGCCTGGGATATTAGGACTTTGGGGTTTGGAGCATCATGGGGCAGACAGATGG  
TGGATGGTCTGGACAAGAAGCGAGTAAGCCACTGCGGTTGGTCATACTGAAGGGAATTGATGGCAAGAGGATCCC  
CTGAGCAAGTCAGAAGTTACTCTCATCAGTCGTTTATGGTCAACCTGAGGTACTCTGCTGAGTGGGCAAGGCT  
GAAGTAAGAGGCCTGTGGAATGCAGCATTACCTGCTGGACAGAGCAGGGCAGGCAGTTCTATGCCTTGGAGCTCC  
TGACTGCAGGGACTCTGTCCCCACACTCAGAAAGACTCAGCTCACTCAATGAGAGAATGTGATTTACTTTATAGA  
ACGTATAATCAACTTTGTTGAATAATTTGTTCTATTAAAGGCTGTCTAAAATGTGATGTCTTCATCATAGTATGAA  
GTGTTGAAAATTAATAACGAGCCTAGTTTAGGAAAAAGCTGCTTAAACTGTGGCTCTAAGAGAGTAATCATAAA  
ATACCTTAGATAAAATTGCACTATGGAATTTTCAATTGAGTATGTTTAAATTATTGGCTGTCTACTAATACATCT  
GCTTCAAAATGAACATATTTTATAAAATTGGCATCAATTTTAAATGACGCTCCTGGTATGGAACCTCAGATATACC

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**FIGURE 439B**

CTATTGGAGACAATCCTTTGATCATAAATTCTCCCCAACTATAAATCATTTTATGTCCTTAAAAAAAAAAAAA



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**FIGURE 440**

MELEVRRVRQAFLSGRSRPLRFRLQQLEALRRMVQEREKDILTAIAADLCKSEFNVYSQEVITVLGEIDFMLENL  
PEWVTAKPVKKNVLTMLDEAYIQPQPLGVVLIIGAWNYPFVLTIQPLIGAIAGNAVI IKPSELSENTAKILAKL  
LPQYLDQDLYIVINGGVEETTELLKQRFDHIFYTGNTAVGKIVMEAAAKHLTPVTLELGGKSPCYIDKDCDLDIV  
CRRITWGKYMNCGQTCIAPDYILCEASLQNQIVWKIKETVKEFYGENIKESPDYERIINLRHFKRILSLLEGQKI  
AFGGETDEATRYIAPTVLTDVDPKTKVMQEEIFGPILPIVPVKNVDEAINFINEREKPLALYVFSHNHKLKRM  
DETSSGGVTGNDVIMHFTLNSFPFGGVGSSGMGAYHGKHSFDTFSHQRPCLLKSLKREGANKLRYPNSQSKVDW  
GKFFLLKRFNKEKLGLLLLTFLGIVA AVLKAEYY

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**FIGURE 441**

GCGCGCCTTCTCCAGTCCGCGGTGCCATGGGCCCCCGCCCGTCTGTTCGCGCTGCTGCTGCTCTTCGTAGGCGGAG  
TCGCCGAGTCGATCCGAGAGACTGAGGTCATCGACCCCGAGGACCTCCTAGAAAGGCCGATACTTCTCCGGAGCCC  
TACCAGACGATGAGGATGTAGTGGGGCCCGGGCAGGAATCTGATGACTTTGAGCTGTCTGGCTCTGGAGATCTGG  
ATGACTTGAAGACTCCATGATCGGCCCTGAAGTTGTCCATCCCTTGGTGCCTCTAGATAACCATATCCCTGAGA  
GGGCAGGGTCTGGGAGCCAAGTCCCCACCGAACCCAAGAACTAGAGGAGAATGAGGTTATCCCCAAGAGAATCT  
CACCCGTTGAAGAGAGTGAGGATGTGTCCAACAAGGTGTCAATGTCCAGCACTGTGCAGGGCAGCAACATCTTTG  
AGAGAACGGAGGTCTTGGCAGCTCTGATTGTGGGTGGCATCGTGGGCATCCTCTTTGCCGTCTTCTGATCCTAC  
TGCTCATGTACCGTATGAAGAAGAAGGATGAAGGCAGCTATGACCTGGGCAAGAAACCCATCTACAAGAAAGCCC  
CCACCAATGAGTTCTACGCGTGAAGCTTGCTTGTGGGCACTGGCTTGGACTTTAGCGGGGAGGGAAGCCAGGGGA  
TTTTGAAGGGTGGACATTAGGGTAGGGTGAGGTCAACCTAATACTGACTTGTGAGTATCTCCAGCTCTGATTACC  
TTTGAAGTGTTCAGAAGAGACATTGTCTTCTACTGTTCTGCCAGGTTCTTCTTGAGCTTTGGGCCTCAGTTGCC  
TGGCAGAAAAATGGATTCAACTTGGCCTTTCTGAAGGCAAGACTGGGATTGGATCACTTCTTAACTTCCAGTTA  
AGAATCTAGGTCCGCCCTCAAGCCCATACTGACCATGCCTCATCCAGAGCTCCTCTGAAGCCAGGGGGCTAACGG  
ATGTTGTGTGGAGTCTTGGCTGGAGTCTCCCCCAGTGGCCTTCTCCTTCCCTTTCACAGCCGGTCTCTCTGC  
CAGGAAATGGGGGAAGGAACTAGAACCACCTGCACCTTGAGATGTTTCTGTAAATGGGTACTTGTGATCACACTA  
CGGGAATCTCTGTGGTATATACCTGGGGCCATTCTAGGCTCTTTCAAGTGACTTTTGGAAATCAACCTTTTTTAT  
TTGGGGGGGAGGATGGGGAAAAAGAGCTGAGAGTTTATGCTGAAATGGATTTATAGAATATTTGTAAATCTATTTT  
TAGTGTGTTGTTGTTTTTTTAACTGTTTCATTCCCTTGTGTCAGAGTGATATCTCTGCCTGGGCAAGAGTGTGGAG  
GTGCCGAGGTGCTTTCATTCTCTCGCACATTTCCACAGCACCTGCTAAGTTTGTATTTAATGTTTTTGTGTTTTG  
TTTTTGTGTTTTCTTGAAAAATGAGAGAAGAGCCGGAGAGATGATTTTTATTAAATTTTTTTTTTTTTTTTTTTT  
TACTATTTATAGCTTTAGATAGGGCCTCCCTTCCCCTCTTCTTTCTTTGTTCTCTTTTCAATAACCCCTTCCCCA  
GTTTTTTTTTTTATACTTTAAACCCCGCTCCTCATGGCCTTGGCCCTTTCTGAAGCTGCTTCTCTTATAAAATAG  
CTTTTGCCGAAACATAGTTTTTTTTTTAGCAGATCCCAAATATAATGAAGGGGATGGTGGGATATTTGTGTCTGT  
GTTCTTATAATATATTATTATTTCTTCTTGGTTCTAGAAAAATAGATAAATATATTTTTTTTTCAGGAAATAGTGTG  
GTGTTTTCCAGTTTGATGTTGCTGGGTGGTTGAGTGAGTGAATTTTCATGTGGCTGGGTGGGTTTTTGCCTTTTTTC  
TCTTGCCCTGTTCTGCTGCTTCTGATGGGGCTGGAATAGTTGAGGTGGATGTTCTACCTTTCTGCCTTCTG  
TTTGGGACCCAGCTGGTGTCTTTGGTTTGCTTTCTTCAGGCTCTAGGGCTGTGCTATCCAATACAGTAACCACA  
TGCGGCTGTTTAAAGTTAAGCCAATTAAATCACATAAGATTAAAAATTCCTTCCTCAGTTGCACTAACCACGTT  
TCTAGAGGCGTCACTGTATGTAGTTCATGGCTACTGTACTGACAGCGAGAGCATGTCCATCTGTTGGACAGCACT  
ATTCTAGAGAACTAACTGGCTTAACGAGTCACAGCCTCAGCTGTGCTGGGACGACCCTTGTCTCCCTGGGTAGG  
GGGGGGGAATGGGGGAGGGCTGATGAGGCCCCAGCTGGGGCCTGTTGTCTGGGACCCTCCCTCTCCTGAGAGGG  
GAGGCCTGGTGGCTTAGCCTGGGCAGGTCGTGTCTCTCTGACCCCACTGGCTGCGGTGAGGGGAACCACCCTC  
CCTTGCTGCACCACTGAGCCATTAGCTCCCGTCACCACTGCAACCCAGGGTCCCAGCTGGCTGGGTCTCTTCTGC  
CCCCAGTGCCCTTCCCCTTGGGCTGTGTTGGAGTGAGCACCTCCTCTGTAGGCACCTCTCACACTGTTGTCTGTT  
ACTGATTTTTTTTGATAAAAAAGATAAAACCTGGTACTTTCTAAAAA

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**FIGURE 442**

MAPARLFALLLLFVGGVAESIRETEVIDPQDLLEGYFSGALPDDEDVVGPGQESDDFELSGSGDLDDLED SMIG  
PEVVHPLVPLDNHUPERAGSGSQVPTEPKKLEENEVIPKRISPVEESEDVSNKVSMSSTVQGSNIFERTEVLAAL  
IVGGIVGILFAVFLILLMYRMKKKDEGSYDLGKKPIYKKAPTNEFYA

**FIGURE 443A**

[illegible]

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**FIGURE 443B**

TGATACAAATTCAACAGTAATTTCAATTAAACGAGTCCCCTACCACACCTCAGGGAGAATATTTGTTAAAGACAT  
TTCTAAAGTAACTCTGACATTTTTACTTTTCTTTGTTATGGTTTCTAATGTAAATTTTTTCCCTTATCATCTTA  
TACTGGAGGAAATATATTTCTATAGTCTCCTAAACAGAGAAGGAAACCAAATGGTTTCACATTTAAAGTTATTGG  
ACATAATCCTTTTACTTTGTTCAAGTAAAAATATTCAGCAAAGCCAGACTGAAATAATAACATGAATGGGCTTAT  
TAAA

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**FIGURE 444**

MSHQPLSCLTEKEDSPSESTGNGPPHLAHPNLDFTPEELLQOMKELLTENHQLKEAMKLNNQAMKGRFEELSAW  
TEKQKEERQFFEIQSKEAKERLMALSHENEKLKEELGKLKGKSERSSDPTDDSRLPRAEAEQEKDQLRTQVVRL  
QAEKADLLGIVSELQLKLNSSGSSSEDSFVEIRMAEGEAEGSVKEIKHSPGPTRTVSTGTALSKYRSRSADGAKNY  
FEHEELTVSQLLLCLREGNQKVERLEVALKEAKERVSDFEKKTSNRSEIETQTEGSTEKENDEEKGPETVGSEVE  
ALNLQVTSLSFKELQEAHTKLSEAELMKKRLQEKQALERKNSAIPSELNEKQELVYTNKKLELQVESMLSEIKME  
QAKTEDEKSKLTVLQMTNKLLOEHNNALKTIEELTRKESEKVDRAVLKELSEKLELAEKALASKQLQMDKQOT  
IAKQEEEDLETMTILRAQMEVYCSDFAERAAREKIHEEKEQLALQLAVLLKENDAFEDGGRQSLMEMQSRHGART  
SDSDQQAYLVQRGAEDRDWRQQRNIP IHSCP KCGEVLPDIDTLQIHVMDCII

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**FIGURE 445**

GGCACGAGGGGCTGCCCCCTCCGCCACCGCCGCCGCCGCCGCCGAGTTCCCTGGTCAGCGTCCCATCCCCGGTCG  
GGAGTTCTCTCCAGGCGGCACGATGCCGAGGAAACAGTGACCCCTGAGCGAAGCCAAGCCGGGCGGCAGGAACTTC  
TGCA**ATG**TCCCATCAACCTCTCAGCTGCCTCACTGAAAAAGGAGGACAGCCCCAGTGAAAGCACAGGAAATGGACC  
CCCCACCTGGCCCCACCCAAACCTGGACACGTTTACCCCCGAGGAGCTGCTGCAGCAGATGAAAGAGCTCCTGAC  
CGAGAACCACCAGCTGAAAGAAGCCATGAAGCTAAATAATCAAGCCATGAAAGGGAGATTTGAGGAGCTTTCGGC  
CTGGACAGAGAAACAGAAGGAAGAACGCCAGTTTTTTTGGATACAGAGCAAAGAAGCAAAGAGCGTCTAATGGC  
CTTGAGTCATGAGAATGAGAAATTGAAGGAAGAGCTTGGAAAACTAAAAGGGAAATCAGAAAGGTCATCTGAGGA  
CCCCACTGATGACTCCAGGCTTCCCAGGGCCGAAGCGGAGCAGGAAAAGGACCAGCTCAGGACCCAGGTGGTGAG  
GCTACAAGCAGAGAAGGCAGACCTGTTGGGCATCGTGTCTGAACTGCAGCTCAAGCTGAACTCCAGCGGCTCCTC  
AGAAGATTCCTTTGTGAAATTAGGATGGCTGAAGGAGAAGCAGAAGGGTCAGTAAAAGAAATCAAGCATAGTCC  
TGGGCCCCACGAGAACAGTCTCCACTGGCACGGCATTGTCTAAATATAGGAGCAGATCTGCAGATGGGGCCAAGAA  
TTACTTCGAACATGAGGAGTTAACTGTGAGCCAGCTCCTGCTGTGCCAAGGGAAGGGAATCAGAAGGTGGAGAG  
ACTTGAAGTTGCACTCAAGGAGGCCAAAGAAAGAGTTTCAGATTTTGAAAAAGAAAACAAGTAATCGTTCTGAGAT  
TGAAACCCAGACAGAGGGGAGCACAGAGAAAGAGAATGATGAAGAGAAAAGGCCCGGAGACTGTTGGAAGCGAAGT  
GGAAGCACTGAACCTCCAGGTGACATCTCTGTTTAAAGGAGCTTCAAGAGGCTCATACAAAACCTCAGCGAAGCTGA  
GCTAATGAAGAAGAGACTTCAAGAAAAGTGTGAGGCCCTTGAAAGGAAAAAATTCTGCAATTCCATCAGAGTTGAA  
TGAAAGCAAGAGCTTGTTTATACTAACAAAAAGTTAGAGCTACAAGTGGAAGCATGCTATCAGAAATCAAAAT  
GGAACAGGCTAAAACAGAGGATGAAAAGTCCAAATTAAGTGTGCTACAGATGACACACAACAAGCTTCTTCAAGA  
ACATAATAATGCATTGAAAACAATTGAGGAACTAACAAGAAAAGAGTCAGAAAAAGTGGAAGGAGGAGTGTCTGAA  
GGAAGTGAAGTAAAAACTGGAAGTGGCAGAGAAGGCTCTGGCTTCCAAACAGCTGCAAATGGATGAAATGAAGCA  
AACCATTGCCAAGCAGGAAGAGGACCTGGAACCATGACCATCCTCAGGGCTCAGATGGAAGTTTACTGTTCTGA  
TTTTCATGCTGAAAGAGCAGCGAGAGAGAAAATTATGAGGAAAAGGAGCAACTGGCATTGCAGCTGGCAGTTCT  
GCTGAAAGAGAATGATGCTTTCGAAGACGGAGGCAGGCAGTCCTTGATGGAGATGCAGAGTCGTCATGGGGCGAG  
AACAAGTGAAGTCTGACCAGCAGGCTTACCTTGTTCAAAGAGGAGCTGAGGACAGGGACTGGCGGCAACAGCGGAA  
TATTCCGATTTCATTCTGCCCCAAGTGTGGAGAGGTTCTGCCTGACATAGACACGTTACAGATTACAGTGATGGA  
TTGCATCATT**TAAG**TGTTGATGTATCACCTCCCCAAAACCTGTTGGTAAATGTCAGATTTTTTCTCCAAGAGTTG  
TGCTTTTGTGTTATTTGTTTTCACCTCAAATATTTTGCCTCATTATTCTTGTTTTAAAAGAAAGAAAACAGGCCGG  
GCACAGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGTCGAGGTGGGTGGATCACTTGGGGTCAGGGTTTGA  
GACCAGCCTGGCCAACATGGCGGAACCCTGTCTCTACCAAATTACAAAAATTAGCCGAGCATGGTGGCGCATGC  
CTGTAGTCGCAGCTACTCGCGAGGTTGAGGCAGGAGAATTGCTTGAACCCAGGAAGTGGCAGTTGCAGTGAGCCG  
AGACGACACCACTGCACTCCAGCCTGGGTGACAGAGGGAGACTCTGTCTCGAAAGAAAAAAAAAAAAAAAAAAAA  
AA

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**FIGURE 446**

MSHQPLSCLTEKEDSPSESTGNGPPHLAHPNLDFTPEELLQOMKELLTENHQLKEAMKLNQAMKGRFEELSAW  
TEKQKEERQFFEIQSKEAKERLMALSHENEKLKEELGKLKGKSERSSDPTDDSRLPRAEAEQEKDQLRTQVVRL  
QAEKADLLGIVSELQLKLNSSGSSSEDSFVEIRMAEGEAGSVKEIKHSPGSTRTVSTGTALSHYRRRSADGAKNY  
FEHEELTVSQLLLCLREGNQKVERLEVALKEAKERVSDFEKKTSNRSEIETQTEGSTEKENDEEKGPETVGSEVE  
ALNLQVTSLFKELQEAHTKLSEAELMKKRLQEKQALERKNSAIPSELNEKQELVYPNKKLELQVESMLSEIKME  
QAKTEDEKSKLTVLQMTNKLQEHNNALKTIEELTRKESEKVDRAVLKELSEKLELAEKALASKQLQMDQEMKQT  
IAKQEEEDLETMTILRAQMEVYCSDFAERAAREKIHEEKEQLALQLAVLLKENDAFEDGGRQSLMEMQSRHGART  
SDSDQQAYLVQRGAEDRDWRQQRNIPIHSCPKCGEVLDPDIDTLQIHVMDCII



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**FIGURE 447**

GGTTTGTGTAGAGAGGCGTGCAGAGCCCGTTGTCCGGAGTGCACCTGCTGCCTGTTCTGTCCCTCCCGGGAGCCC  
CCGCCGCTGTTCGCCGTCGAGTCGCCATGGAAGTGCAGAAAGAGGCACAGCGCATCATGACCCTGTCCGTGTGGAA  
GATGTATCACTCCCGCATGCAGCGCGGTGGCCTGCGGCTGCACCGGAGTCTGCAGCTGTGCTGGTTCATGCGCAG  
CGCCCGGGAGCTCTACCTCTCGGCCAAGGTGGAGGCCCTCGAGCCCGAGGTGTGCTTGCCGGCCGCCCTCCCTC  
TGACCCTCGCCTGCACCCGCCCGAGAAGCCGAGTCCACGGCCGAGACAGCGACCCCGACGGTGAGCACCCGTT  
TCCGGAGCCAATGGACACGCAGGAGGCGCCGACAGCCGAGGAGACCTCCGCCTGCTGTGCCCCGCGCCCCGCCAA  
AGTCAGCCGCAAACGACGCAGCAGCAGCCTGAGCGACGGCGGGGACGTTGGACTGGTCCCAGCAAGAAAGCCCG  
TCTGGAAGAAAAGGAAGAAGAGGAGGGAGCGTCATCCGAAGTCGCCGATCGCCTGCAGCCCCCTCCGGGCCAAGC  
GGAGGGCGCCTTTCCCAACCTGGCCCGCGTCTTGCAGAGGCGCTTCTCCGGCCTCCTGAACTGCAGCCCCGCGGC  
CCCTCCGACGGCGCCGCCCGCGTGCAGAGCAAAGCCCGCTTGCCGCCCGGCGGACAGCATGCTCAACGTGCTCGT  
GCGGGCCGTGGTGGCCTTCTTGAGGACCCCGAGCGGCGCTGCCGGAGCCCAGAGCGCGCGTCAACCGTCGGCCCCG  
AGGGCGCAGACCTGAGGCGAGGCCACCCCCCTCCATCCTGGGGGAAGCGCCCGCAAAACCGTGGAGAGAAGCCG  
CCGCCCGGGCTGCTGAGAGGCCCGGAGAGGACTCTGTCCCCGGGGAGCCATCGCCTTCAGTGTGCAGGGACGGCA  
CCGAGGAGTCTGAGCCGGGCGCGGGCGCCTTCCGCAGAGACCTGCGCCCACAGGTGCTGTCTTAGTGGACTGGGA  
CGTGAACCTTTTCGCTCTCCTTCTGGACTGGGAGAAGGGAGGCTTGGGTGTTGTGTTTTTTGTTTTGTTTGT  
TTGTTTTTAAAGATCTCCTCAGGGTCGGACTTCATTTTGTACTGTGGGCTGTGCTGGCCCTTTCAAGGTTTTTCA  
AGAGTTGGTTTTTTCGTTTTCCAACCTCGGAGAATTCCAGGCACTCCCCCTCCCCCTCCGCTGACATACTTGTATAA  
GCGGTTCATCGTTGCGTCATGGGGCAGGCGTGGGGAGCTTCCGTGCGCTTGGCTGGGTGTGGGCCTGGAGGAAGG  
TCCTGGGGCGTGCACCTCGCCTGGGCAGTGGGGAGGAGAGTGGCCTGAGTTACTTACCCCCGCGTGTGCTGGTT  
AATGTCCCGCTCTCTGCACCTTCGGGTGGGAGCGGGGACTGATCTACTTTCACATTCTCAAGTTTTTCTCATCT  
GCATTAGAGGTCCCCAGTAGGTTCCAGGTTCCAGCGTGCCCCCTCCCTCAGACACACGGACACAATCAGCCGAGA  
AGTTCCTGGTCTGAATCACGAGAATGTGGAGGGGTGGGGGTGTGAGTGAAAGGCATAAGGCTGAGCTGAGACC  
AGTTGCTGGTGAAACTGGGCCAATCTGGGGAGGGGAACATCCTTGCCAGGGAGTTTCTGAGGGTCTGCTTTGTTT  
ACCTTTTCGTGCGGTGGATTCTTTTTAACTCCGTCTACCTGGCGTTTTGTAGAAATGTCAGATAGGAAAATAAAA  
ACCAITTTGAGT

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**FIGURE 448**

MEVQKEAQRIMTILSVWKMYHSRMQRGGLRLHRSLQLSLVMRSARELYLSAKVEALEPEVSLPAALPSDPR LHPPR  
EAESTAETATPDGEHPFPEPMDTQEAPTAEETSACCAPRPAKVSRKRRSSSLSDGGDVGLVPSKKARLEEKEEEEE  
GASSEVADRLQPPPGQAEGAFP NLARVLQRRFSGLLNCS PAAPP TAPPACEAKPACRPAD SMLNVLVRAV VAF

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**FIGURE 449**

GCCGGCCGAACCCAGACCCGAGGTTTTAGAACAGAGTCAGGCGAAGCTGGGCCAGAACC GCGACCTCCGCAACC  
TTGAGCGGCATCCGTGGAGTGCGCCTGCGCAGCTACGACCGCAGCAGGAAAGCGCCGCCGGCCAGGCCAGCTGT  
GGCCGGACAGGGACTGGAAGAGAGGACGCGGTTCGAGTAGGTGTGCACCAGCCCTGGCAACGAGAGCGTCTACCCC  
GAACTCTGCTGGCCTTGAGGTGGGGAAGCCGGGGAGGGCAGTTGAGGACCCCGCGGAGGCGCGTGA CTGGTTGAG  
CGGGCAGGCCAGCCTCCGAGCCGGGTGGACACAGGTTTTTAAACATGAATCCTACACTCATCCTTGCTGCCTTTT  
GCCTGGGAATTGCCTCAGCTACTCTAACATTTGATCACAGTTTAGAGGCACAGTGGACCAAGTGAAGGCGATGC  
ACAACAGATTATACGGCATGAATGAAGAAGGATGGAGGAGAGCAGTGTGGGAGAAGAACATGAAGATGATTGAAC  
TGCACAATCAGGAATACAGGGAAGGGAAACACAGCTTCACAATGGCCATGAACGCCTTTGGAGACATGACCAGTG  
AAGAATTCAGGCAGGTGATGAATGGCTTTCAAACCGTAAGCCAGGAAGGGGAAAGTGTTCCAGGAACCTCTGT  
TTTATGAGGCCCCCAGATCTGTGGATTGGAGAGAGAAAGGCTACGTGACTCCTGTGAAGAATCAGGGTCAGTGTG  
GTTCTTGTTGGGCTTTTAGTGCTACTGGTGCTCTTGAAGGACAGATGTTCCGGAAAAC TGGAGGCTTATCTCAC  
TGAGTGAGCAGAATCTGGTAGACTGCTCTGGGCCTCAAGGCAATGAAGGCTGCAATGGTGGCCTAATGGATTATG  
CTTTCCAGTATGTT CAGGATAATGGAGGCCTGGACTCTGAGGAATCCTATCCATATGAGGCAACAGAAGAATCCT  
GTAAGTACAATCCCAAGTATTCTGTTGCTAATGACACCGGCTTTGTGGACATCCCTAAGCAGGAGAAGGCCCTGA  
TGAAGGCAGTTGCAACTGTGGGGCCCATTTCTGTTGCTATTGATGCAGGTCATGAGTCCTTCTGTCTATAAAG  
AAGGCATTTATTTTGAGCCAGACTGTAGCAGTGAAGACATGGATCATGGTGTGCTGGTGGTTGGCTACGGATTTG  
AAAGCACAGAATCAGATAACAATAAATATTGGCTGGTGAAGAACAGCTGGGGTGAAGAATGGGGCATGGGTGGCT  
ACGTAAAGATGGCCAAAGACCGGAGAAACCAATTGTGGAATTGCCTCAGCAGCCAGCTACCCCACTGTGTGAGCTG  
GTGGACGGTGATGAGGAAGGACTTGACTGGGGATGGCGCATGCATGGGAGGAATTCATCTTCAGTCTACCAGCCC  
CCGCTGTGTGCGATACACACTCGAATCATTGAAGATCCGAGTGTGATTTGAATTCGTGTATTTTTACACTGGT  
AAATGTTACCTCTATTTTAATTACTGCTATAAATAGGTTTATATTATTGATTCACTTACTGACTTTGCATTTTCG  
TTTTTAAAGGATGTATAAATTTTACCTGTTTAAATAAAATTTAATTTCAAATGTA

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**FIGURE 450**

MNPTLILAAFCGLGASATLTDFHSLEAQWTKWKAMHNRLYGMNEEGWRRRAVWEKNMKMIELHNQEYREGKHSFTM  
AMNAFGDMTSEEFQVMNGFQNRKPRKGKVFQEPLFYEAPRSVDWREKGYVTPVKNOGQCGSCWAFSATGALEGQ  
MFRKTGRLISLSEQNLVDCSGPQGNEGCNGGLMDYAFQYVQDNGGLDSEESYPYEATEESCKYNPKYSVANDTGF  
VDIPKQEKALMKAVATVGPI SVAIDAGHESFLFYKEGIYFEPDCSSDMDHGVLVVGYGFESTESDNNKYWL VKN  
SWGEEWGMGGYVKMAKDRRNHCGIASAASYPTV

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**FIGURE 451**

AATTCCGCGGAATCATCGGAATCCTTCACCAATGGCATCCAGCCCCGGCCCAGCGTCGGCGAGGCAATGATCCTCTC  
ACCTCCAGCCCTGGCCGAAGCTCCCCGGCGTACTGATGCCCTCACCTCCAGCCCTGGCCGTGACCTTCCACCATT  
GAGGATGAGTCCGAGGGGCTCCTAGGCACAGAGGGGCCCTGGAGGAAGAAGAGGATGGAGAGGAGCTCATTGGA  
GATGGCATGGAAAGGGACTACCGCGCCATCCCAGAGCTGGACGCCTATGAGGCCGAGGGACTGGCTCTGGATGAT  
GAGGACGTAGAGGAGCTGACGGCCAGTCGAAGGGAGGCAGCAGACGGGCCATGCGGCACGGTGACCGGGAGCTGG  
CCGGGGCTGGGCGCATGCGCCGTGGGCTCCTGTATGACAGCGATGAGGAGGACGAGGAGCGCCCTGCCCGCAAGC  
GCCGCCAGTGGAGCCGGCACGGAGGACGGCGAGGAGGACGAGCAGATGATTGAGAGCATCGAGAACCTGGAGGAT  
CTCAAAGGCCACTCTGTGCGGAGTGGGTGAGCATGGCGGGCCCCCGGCTGGAGATCCACCACCGCTTCAAGAAC  
TTCCTGCGCACTCACGTGACAGCCACGGCCACAACGTCTTCAAGGAGCGCATCAGCGACATGTGCAAAGAGAAC  
CGTGAGAGCCTGGTGGTGAACATATGAGGACTTGGCAGCCAGGGAGCACGTGCTGGCCTACTTCTGCTGAGGCA  
CCGGCGGAGCTGCTGCAGATCTTTGATGAGGCTGCCCTGGAGGTGGTACTGGCCATGTACCCCAAGTACGACCGC  
ATCACCAACCACATCCATGTCCGCATCTCCACCTGCCTCTGGTGGAGGAGCTGCGCTCGCTGAGGCAGCTGCAT  
CTGAACCAGCTGATCCGCACCAGTGGGGTGGTGACCAGCTGCACTGGCGTCCTGCCCCAGCTCAGCATGGTCAAG  
TACAACTGCAACAAGTGCAATTTCTGCTCTGGGTCTTTCTGCCAGTCCCAGAACCAGGAGGTGAAAACCAGGCTCC  
TGTCCTGAGTGCCAGTCGGCCGGCCCCCTTTGAGGTCAACATGGAGGAGACCATCTATCAGAACTACCAGCGTATC  
CGAATCCAGGAGAGTCCAGGCAAAGTGGCGGCTCGGCGGCTGCCCGCTCCAAGGACGCCATTCTCCTCGCAGAT  
CTGGTGGACAGCTGCAACGCAGGAGACGAGATAGAGCTGACTGGCATCTATCACAACAACATATGATGGCTCCCTC  
AACACTGCCAATGGCTTCCCTGTCTTTGCCACTGTCATCCTAGCCAACCACGTGGCCAAGAAGGACAACAAGGTT  
GCTGTAGGGGAACTGACCGATGAAGATGTGAAGATGATCACTAGCCTCTCCAAGGATCAGCAGATCGGAGAGAAG  
ATCTTTGCCAGCATTGCTCCTTCCATCTATGGTCATGAAGACATCAAGAGAGGCCCTGCTCTGGCCCTGTTTCGGA  
GGGGAGCCCCAAAACCAGGTGGCAAGCACAAGGTACGTGGTGATATCAACGTGCTCTTGTGCGGAGACCCTGGC  
ACAGCGAAGTCGCAGTTTCTCAAGTATATTGAGAAAAGTGTCCAGCCGAGCCATCTTACCAGTGGCCAGGGGGCG  
TCGGCTGTGGCCGTACGGCGTATGTCCAGCGGCACCCCTGTGAGCAGGGAGTGGACCTTGGAGGCTGGGGCCCTG  
GTTCTGGCTGACCGAGGAGTGTGTCTCATTGATGAATTTGACAAGATGAATGACCAGGACAGAACCAGCATCCAT  
GAGGCCATGGAGCAACAGAGCATCTCCATCTCGAAGGCTGGCATCGTCACCTCCCTGCAGGCTCGCTGCACGGTC  
ATTGCTGCCGCCAACCCTATAGGAGGGCGCTACGACCCCTCGCTGACTTTCTCTGAGAACGTGGACCTCACAGAG  
CCCATCATCTCACGCTTTGACATCCTGTGTGTGGTGAGGGACACCGTGGACCCAGTCCAGGACGAGATGCTGGCC  
CGCTTCGTGGTGGGCAGCCACGTGACACACCCAGCAACAAGGAGGAGGAGGGGCTGGCCAATGGCAGCGCT  
GCTGAGCCCCGCCATGCCAACACGTATGGCGTGGAGCCCCCTGCCCCAGGAGGTCTGAAGAAGTACATCATCTAC  
GCCAAGGAGAGGGTCCACCCGAAGCTCAACCAGATGGACCAGGACAAGGTGGCCAAGATGTACAGTGACCTGAGG  
AAAGAATCTATGGCGACAGGCAGCATCCCCATTACGGTGCGGCACATCGAGTCCATGAGTCATGGCGGAGGCCCCA  
CGCGCGCATCCATCTGCGGGACTATGTGATCGAAGACGACGTCAACATGGCCATCCGCGTGATGCTGGAGAGCTT  
CATAGACACACAGAAGTTCAGCGTCATCGCAGCATGCGCAAGACTTTTGCCCGCTACCTTTTATTCCGGCGTGAC  
AACAATGAGCTGTTGCTCTTCATACTGAAGCAGTTAGTGGCAGAGCAGGTGACATATCAGCGCAACCGCTTTGGG  
GCCCAGCAGGACACTATTGAGGTCCCTGAGAAGGACTTGGTGGATAAGGCTCGTCAGATCAACATCCACAACCTC  
TCTGCATTTTATGACAGTGAGCTCTTCAGGATGAACAAGTTCAGCCACGACCTGAAAAGGAAAATGATCCTGCAG  
CAGTTCTGAAGGCCCTATGCCATCCATAAGGATTCTTTGGGATTCTGGTTTGGGGTGGTCAGTGCCCTCTGTGCTT  
TATGGACACAAAACCAGAGCACTTGATGAACTCGGGGTACTAGGGTCAGGGCTTATAGCAGGATGTCTGGCTGCA  
CCTGGCATGACTGTTTGTCTTCCAAGCCTGCTTTGTGCTTCTCACCTTTGGGTGGGATGCCTTGCCAGTGTGTC  
TTACTTGGTTGCTGAACATCTTGCCACCTCCGAGTGCTTTGTCTCCACTCAGTACCTTGGATCAGAGCTGCTGAG  
TTCAGGATGCCTGCGTGTTGGTTTAGGIGTTAGCCTTCTTACATGGATGTCAGGAGAGCTGCTGCCCTCTTGGCGT  
GAGTTGCGTATTTCAGGCTGCTTTTGCTCGCTTTGGCCAGAGAGCTGGTTGAAGATGTTTGTAAATCGTTTTTCAGTC  
TCCTGCAGGTTTCTGTGCCCCGTGTGGIGGAAGAGGCACGACAGTGCCAGCGCAGCGTTCTGGGCTCCTCAGTCGC  
AGGGGTGGGATGTGAGTCATGCGGATTATCCACTCGCCACAGTTATCAGCTGCCATTGCTCCCTGTCTGTTTCCC  
CACTCTCTTATTTGTGCATTTCGGTTTGGTTTCTGTAGTTTTAATTTTAAATAAAGTTGAATAAAATATAAAAAA  
AAAA

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**FIGURE 452**

MASSPAQRRRGNDPLTSSPGRSSRRTDALTSSPGRDLPPFEDESEGLLGTEGPLEEEEDGEELIGDGMERDYRAI  
PELDAYEAEGALDDEDVEELTASRREAADGPCGTVTGSWPGLGACAVGSCMTAMRRTRSALPASAASGAGTEDG  
EEDEQMIESIENLEDLKGHSVREWVSMAGPRLEIHHRFKNFLRTHVDSHGHNVFKERISDMCKENRESLVVNYED  
LAAREHVLAYFLPEAPAELLQIFDEAALEVVLAMYPKYDRITNHIHVRI SHLPLVEELRSLRQLHLNQLIRTSGV  
VTSGTGVLPQLSMVKYCNKCNFVLGFFCQSQNQEVKPGSCPECQSAGPFEVNMEETIYQNYQRIRIQESPGKVA  
ARRLPRSKDAILLADLVDSCNAGDEIELTGIYHNNYDGS LNTANGFPVFATVILANHVAKKDNKVAVGELTDEDV  
KMITSLSKDQQIGEKIFASIAPSIYGHEDIKRGPALALFGGEPKNPGGKHKVRGDINVLLCGDPGTAKSQFLKYI  
EKVSSRAIFTTGQASAVAVTAYVQRHPVSREWTL EAGALVLADRGVCLIDEFDKMNDQDRTSIHEAMEQQSISI  
SKAGIVTSLQARCTVIAAANPIGGRYDPSLTFSENVDLTEPIISRFDILCVVRD TVDPVQDEMLARFVVGSHVRH  
HPSNKEEEGLANGSAAEPAMPNTYGVEPLPQEV LKYYIIYAKERVH PKLNQMDQDKVAKMYSDLRKESMATGSIP  
ITVRHIESMSHGGGPRAHP SAGLCDRRRRQHGHPRDAGELHRHTEVQRHRSMRKTFARYLSFRDNNELLFLK  
QLVAEQVTYQRNRFGAQQDTIEVPEKDLVDKARQINIHNL SAFYDSELF RMNKF SHDLKRKMILQQF

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**FIGURE 453**

CCGGTGCCGGGCGAACATGGCGGCGGCCACCGGACCCTCGTTTTGGCTGGGGAATGAAACCCTGAAGGTGCCGCT  
GGCGCTCTTTGCCTTGAACCGGCAGCGCCTGTGTGAGCGGCTGCGGAAGAACCCTGCTGTGCAGGCCGGCTCCAT  
CGTGGTCCTGCAGGGCGGGGAGGAGACTCAGCGCTACTGCACCGACACCGGGTCCTCTTCCTCCAGGAGTCCTT  
CTTTCACTGGGCGTTCCGGTGCTACTGAGCCAGGCTGCTATGGTGTTCATCGATGTTGACACTGGGAAGTCGACCCT  
GTTTGTGCCCAGGCTTCCTGCCAGCCATGCCACCTGGATGGGAAAGATCCATTCCAAGGAGCACTTCAAGGAGAA  
GTATGCCGTGGACGACGTCCAGTACGTAGATGAGATTGCCAGCGTCCTGACGTACAGAAGCCCTCTGTCCTCCT  
CACTTTGCGTGGCGTCAACACGGACAGCGGCAGTGTCTGCAGGGAGGCCTCCTTTGACGGCATCAGCAAGTTTGA  
AGTCAACAATACCATTCTTCAACCAGAGATCGTTGAGAGCCGAGTGTTTAAGACGGATATGGAGCTGGAGGTTCT  
GCGCTATACCAATAAAATCTCCAGCGAGGCCACCCTGAGGTAATGAAGGCTGTAAAAGTGGGAATGAAAGAATA  
TGGGTTGGAAAGCCTCTTCGAGCACTACTGCTACTCCCGGGGCGGCATGCGCCACAGCTCCTACACCTGCATCTG  
CGGCAGTGGTGAGAACTCAGCCGTGCTACACTACGGACACGCCGGAGCTCCCAACGACCGAACGATCCAGAATGG  
GGATATGTGCCTGTTTCGACATGGGCGGTGAGTATTACTCTGTCTGCTTCCGACATCACCTGCTCCTTTCCCGCAA  
CGGCAAGTTCACTGCAGACCAGAAGGCCGTCTATGAGGCAGTGCTGCTGAGCTCCCGTGCCGTCTATGGGTGCCAT  
GAAGCCAGGTGACTGGTGGCCTGACATCGACCGCCTGGCTGACCGCATCCACCTGGAGGAGCTGGCCACATGGG  
CATCCTGAGCGGCAGCGTGGACGCCATGGTCCAGGCTCACCTGGGGGCCGTGTTTATGCCTCACGGGCTTGGCCA  
CTTCTGGGCATTGACGTGCACGACGTGGGAGGCTACCCAGAGGGCGTGGAGCGCATCGACGAGCCCGGCCTGCG  
GAGCCTGCGCACTGCACGGCACCTGCAGCCAGGCATGGTGCTCACCGTGGAGCCGGGCATCTACTTCATCGACCA  
CCTCCTGGATGAGGCCCTGGCGGACCCGGGCCGCGCCTCCTTCTTAACCGCGAGGTCTGCGAGCGCTTTCGCGG  
TTTTGGCGGGGTCCGCATCGAGGAGGACGTCGTGGTGATCGACAGCGGCATAGAGCTGCTGACCTGCGTGCCCCG  
CACTGTGGAAGAGATTGAAGCATGCATGGCAGGCTGTGACAAGGCCTTTACCCCTTCTCTGGCCCCAAGTAGAG  
CCAGCCAGAAATCCCAGCGCACCTGGGGGCCTGGCCTTGCAACCTCTTTTCGTGATGGGCAGCCTGCTGGTCAGC  
ACTCCAGTAGCGAGAGACGGCACCCAGAATCAGATCCCAGCTTCGGCATTGATCAGACCAAACAGTGCTGTTTC  
CCGGGGAGGAAACACTTTTTTAATTACCCTTTTGCAGGCACCACCTTTAATCTGTTTTATACCTTGCTTATTAA  
TGAGCGACTTAAAATGATTGAAAATAATGCTGTCCTTTAGTAGCAAGTAAAATGTGTCTTGCTGTCATTTATATT  
CCTTTTCCCAGGAAAGAAGCATTCTGATACTTTCTGTCAAAAATCAATATGCAGAATGGCATTGCAATAAAAG  
GTTTCCTAAAATG

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**FIGURE 454**

MAAATGPSFWLGNETLKVPLALFALNRQRLCERLRKNPAVQAGSIVVLQGGEETQRYCTDTGVLFLQESFFHWAF  
GVTEPGCYGVIDVDTGKSTLFVPRLPASHATWMGKIHSKEHFKEYAVDDVQYVDEIASVLTSQKPSVLLTLRGV  
NTDSGSVCREASFDGISKFEVNNTILHPEIVESRVFKTDMELEVLRYTNKISSEAHREVMKAVKVGMMKEYGLES  
FEHYCYSRGGMRHSSYTCICGSGENSAVLHYGHAGAPNDRTIQNGDMCLFDMGGEYYSVASDITCSFPRNGKFTA  
DQKAVYEAVLLSSRAVMGAMKPGDWWDIDRLADRIHLEELAHMGILSGSVDAMVQAHLGAVFMPHGLGHFLGID  
VHDVGGYPEGVERIDEPGLRSLRTARHLQPGMVLTVEPGIYFIDHLLDEALADPARASFLNREVLQRFRGFGGVR  
IEEDVVVIDSGIELLTCVPRTVEEIEACMAGCDKAFTPFSGPK



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**FIGURE 455A**

GTGATAACCCCCGTGAGGACAGGCCATGGCTACGTATACGAGTACCCATCCAGATACCAAAAAGGACGTCTATGAT  
ATCCCTCCTTCTCATACCACTCAAGGGGTATACGACATCCCTCCCTCATCAGCAAAAGGCCCTGTGTTTTAGTT  
CCAGTGGGAGAGATAAAACCTCAAGGGGTGTATGACATCCCGCCTACAAAAGGGGTATATGCCATTCCGCCCTCT  
GCTTGCCGGGATGAAGCAGGGCTTAGGGAAAAAGACTATGACTTCCCCCTCCCATGAGACAAGCTGGAAGGCCG  
GACCTCAGACCGGAGGGGGTTTATGACATTCTCCAACCTGCACCAAGCCAGCAGGGAAGGACCTTCATGTAATA  
TACAACCTGTGACATTCCAGGAGCTGCAGAACCGGTGGCTCGAAGGCACCAGAGCCTGTCCCCGAATCACCACCC  
CCGCAACTCGGACAGTCAGTGGGCTCTCAGAACGACGCATATGATGTCCCCGAGGCGTTCAGTTTCTTGAGCCA  
CCAGCAGAAACAGTGAGAAAGCAAACCCCCAGGAAAGGGATGGTGTATGATGTCCCTCTGCATAACCCGCCA  
GATGCTAAAGGCTCTCGGACTTGGTGGATGGGATCAACCGATTGTCTTTCTCCAGTACAGGCAGCACCCGGAGT  
AACATGTCCACGTCTTCCACCTCCTCCAAGGAGTCTTCACTGTGAGCCTCCCCAGCTCAGGACAAAAGGCTCTTC  
CTGGATCCAGACACAGCTATTGAGAGACTTCAGCGGCTCCAGCAGGCCCTTGAGATGGGTGTCTCCAGCCTAATG  
GCACTGGTCACTACCGACTGGCGGTGTTACGGATATATGGAAAGACACATCAATGAAATACGCACAGCAGTGGAC  
AAGGTGGAGCTGTTCTGAAGGAGTACCTCCACTTTGTCAAGGGAGCTGTTGCAAATGCTGCCTGCCTCCCGGAA  
CTCATCTCCACAACAAGATGAAGCGGGAGCTGCAACGAGTTGAAGACTCCCACCAGATCCTGAGTCAAACCAGC  
CATGACTTAAATGAGTGCAGCTGGTCCCTGAATATCTTGGCCATCAACAAGCCCCAGAACAAGTGTGACGATCTG  
GACCGGTTTGTGATGGTGGCAAAGACGGTGCCCGATGACGCCAAGCAGCTCACCACAACCATCAACACCAACGCA  
GAGGCCCTCTTCAGACCCGGCCCTGGCAGCTTGCATCTGAAGAATGGGCCGGAGAGCATCATGAACTCAACGGAG  
TACCACACGGTGGCTCCCAGGGACAGCTGCTGCATCTGGTGACCACAAGGCCCAGGCCACAACAAGGCACTG  
CCCCAGGCCTGAGCAAGGAGCAGGCCCTGACTGTAGCAGCAGTGATGGTTCTGAGAGGAGCTGGATGGATGAC  
TACGATTACGTCCACCTACAGGGTAAGGAGGAGTTTGAGAGGCAACAGAAAGAGCTATTGGAAAAAGAGAATATC  
ATGAAACAGAAACAAGATGCAGCTGGAACATCATCAGCTGAGCCAGTTCCAGCTGTTGGAACAAGAGATTACAAAG  
CCCGTGGAGAATGACATCTCGAAGTGGAAGCCCTCTCAGAGCCTACCCACCACAAACAGTGGCGTGAGTGCTCAG  
GATCGGCAGTTGCTGTGCTTCTACTATGACCAATGTGAGACCCATTTTCAATTTCCCTTCTCAACGCCATTGACGCA  
CTCTTCAGTTGTGTGCTCAGCTCAGCCCAGCCCCCGCAATCTTCGTGGCACACAGCAAGTTTGTCTATCCTCAGTGCA  
CACAACTGGTGTTCATTGGAGACACGCTGACACGGCAGGTGACTGCCAGGACATTTCGCAACAAAGTCATGAAC  
TCCAGCAACCAGCTCTGCGAGCAGCTCAAGACCATAGTCATGGCAACCAAGATGGCCGCCCTCCATTACCCAGC  
ACCACGGCCCTGCAGGAAATGGTGCACCAAGTGACAGACCTTTCTAGAAATGCCAGCTGTTCAAGCGCTCTTTG  
CTGGAGATGGCAACGTTCTGAGAAGAAAAAAGAGGAAGGGGACTGCGTTAACGGTTACTAAGGAAAACTGGAA  
ATACTGTCTGGTTTTTGTAAATGTTATCTATTTTTGTAGATATTTTATATAAAAAATGAAATATTTTAACATTTTA  
TGGGTCACTCACTTTTCAAAATTCAGGGAGCTGGAGAGGGAAATCTTTTTTTTTCCCCCTGAGTGGTTCTTATG  
TATACATAGAAGTATCTGAGACATAAACTGTACAGAAAACCTTGTCACGTGCTTTTGTATGCCCATGTATTTCATG  
TTTGTTTGTAGATGTTTGTCTGATGCATTTTCAATAAAAAACCATGAATTACGAAGCACCTTAGTAAGCACC  
TTCTAATGCTGCATTTTTTTTTGTTGTTGTTAAAAACATACCAGCTGGTTATAATATTGTTCTCCACGTCTTGTG  
ATGATTCTGAGCCTGGCACTCCCAAATCTGGGAAGCATAGTTTATTTGCAAGTGTTACCTTCCAAATCATGAGG  
CATAGCATGACTTATCTTGTGTTTGGAAAACTCTTTTCAAACTGACCATCTTAAACACATGATGGCCAAGTGCCC  
AAAAGCCCTCTTGCGGAGCAAATTTCAGAATATATATGTGGATCCAAGCTCTGATAGTTTCAAGGTGCTGGAGGGAA  
GAGAGACCTGTGTGTTTAGAGGCCAGGACCACAGTTAGGATTGGGTTGTTTCAATACTGAGAGACAGCTACAATA  
AAAGGAGAGCAATTGCCTCCCTGGGGCTGTTCAATCTTCTGCATTTGTGAGTGGTTTCAGTCATGAGGTTTTCCAA  
AAGATGTTTTTAGAGTTGTAAAAACCATATTTGCAGCAAAGATTTACAAAGGCGTATCAGACTATGATTGTTTAC  
CAAAATAGGGGAATGGTTTTGATCCGCCAGTTGCAAGTAGAGGCCCTTTCTGACTCTTAATATTCATTTGGTGCTA  
CTACCCCCATTACCTGAGGGAACTGGCCAGGTCTTGATCATGGAACATAGAGCTACCAGGACATATCCTGCT  
CTCTAAGGGAATTTATTGCTATCTTGCACCTTCTTTAAACTCACATATGCAGACCTGACACTCAAGAGTGGCTA  
GCTACACAGAGTCCATCTAATTTTTGCAACTTCCTGTGGCCAGTGTGTATAACCCCTTCCACTATCTCACAGATA  
GTCACAGCGTCCATTCCATAGTCTGTCTCCTCACATCTGTTAGTATTGACACAGCACAGACACCACAAGCCATCA  
GGTCTTCATGGGGCAGGTGAAATACCTTACCCCATGGGTAAATGTATTACATATTACCAAGAGAAGAAGCAC  
ATTATCTATGATCTTTTGGCCAGTTCTTATTTAGCATTTTTTATTCCAGCCTACTTGGAACATGTTTTTATTG  
CAATATATGCCTGACTGAATTAAGCTTGCTGTTTTAAACAACCAAATCATTGGAACAGAAAAGGATTTAAAAAA  
CAAGAATGCATGATCTCAGAGTGATTAAAAAATAATCAGTGGAATAAATGATCATAGAAGGTGCTTTTCAAAAC

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**FIGURE 455B**

AACTGCTATTATAATTCTCAAAGTCCTACTCTGCCAAAAGAAGATTAAAAGTCATACATTACATTACAAGGAAAT  
GTTTCATGTGGGAAGAGGGTTGCTGAAAATCAACAACGCTTGAAGTTAAAAAGTGTGTCTTTGTAGATTTTCATTGT  
ATAATGTGTATTTCTTAGGAGATGGCTGACTTGATTGATCTACGCTAAGTGGAGACATTTACATTTTTAAACC  
AAATGTTCAATCTGTATTACTCTTTGCCGTCTTGATGTAGAGGCTATTTTTAAATCATTAAATTTTTAGATCTC  
TGTTTTCATA

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**FIGURE 456**

VITPVRTGHGYVYEYPSRYQKD VYDIPPSHTTQGVYDIPPSSAKGPVFSVPVGEIKPQGVYDIPPTKGVYAIPPS  
ACRDEAGLREKDYDFPPPMRQAGRPDLRPEGVYDIPPTCTKPAGKDLHVKNCDIPGAAEPVARRHQSLSPNHPP  
PQLGQSVGSQNDAYDVPRGVQFLEPPAETSEKANPQERDGVYDVPLHNPPDAKGSRDLDVGINRLSFSSTGSTRS  
NMSTSSTSSKESLSASPAQDKRLFLDPDTAIERLQRLQQALEMGVSSLMALVTTDWRCYGYMERHINEIRTAVD  
KVELFLKEYLHFVKGAVANAACLPELILHNKMKRELQRVEDSHQILSQTSHDLNECSWSLNILAINKPQNKDDL  
DRFVMVAKTVPDDAKQLTTTINTNAEALFRPGPSLHLKNGPESIMNSTEYPHGGSQGQLLHPGDHKAQAHNKAL  
PPGLSKEQAPDCSSSDGSESWMDDYDYVHLQKKEEFERQQKELLEKENIMKQNMQLLEHHQLSQFQLLEQEITK  
PVENDISKWKPSQSLPTTNSGVSAQDRQLLCFYDQCETHFISLLNAIDALFSCVSSAQPPRIFVAHSKFVILSA  
HKLVEFIGDTLTRQVTAQDIRNKVMNSSNLCEQLKTIVMATKMAALHYPSTTALQEMVHQVTDLSRNAQLFKRSL  
LEMATF

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**FIGURE 457**

CGCAGGGACCGTGCTCCGCCGTCTCCGCCGCATCTTCCACCCTCGCCGCCGCCGCAGCTCCCCGCGCTCGTGCCA  
CCGCCGCCCGTCCACCCTCAGCGCCACCGCCATGCGGGAGATCGTGCACCTGCAGGCCGGCCAGTGCGGCAACC  
AGATCGGGGCCAAGTTTTGGGAGGTTATCAGTGACGAACATGGCATCGACCCACAGGCACATACCATGGGGACA  
GTGACCTGCAACTGGAGAGGATCAACGTGTACTACAACGAGGCCACAGGAGGAAATTATGTCCCAGAGCGGTGC  
TGGTGGACCTGGAACCCGGCACCATGGACTCTGTCCGTTCTGGCCCCCTTCGGTCAGATCTTTCGGCCGGACAAC  
TCGTGTTTGGCCAATCCGGAGCCGGCAACAACCTGGGCAAGGGGGCACTACACGGAGGGCGCAGAGCTGGTGGACG  
CTGTCCTGGACGTAGTCCGGAAGGAGGCCGAGAGCTGCGACTGCCTTCAGGGCTTCAGCTGACCCACTCGCTGG  
GGGTGGCACGGGGTCCGGAATGGGCACGCTGCTCATCAGTAAGATCCGCGAGGAGTTCCAGACCCGCATCATGA  
ACACCTTCAGCGTGGTGCCTCGCCCAAAGTGTACAGACACGGTGGTGGAGCCCTACAACGCCACGCTGTCTGTGC  
ACCAGCTGGTGGAGAATACGGATGAGACCTACTGCATCGACAACGAGGCACCTACGACATCTGTTTCCGCACCC  
TCAAGCTGACCACCCCCACCTACGGGGACCTCAACCACCTGGTGTGCGCCACCATGAGCGGGGTACCCACCTGCC  
TGCGCTTCCCGGGCCAGCTGAACGCCGACCTGCGCAAGCTGGCCGTCAACATGGTTCCCTTTCTCGCTGCACT  
TCTTCATGCCCCGCTTCGCACCCCTGACCAGCCGGGGCAGCCAGCAGTACCGGGCCCTGACGGTGCCGAGCTCA  
CCCAGCAGATGTTTCGATGCCAAGAACATGATGGCGGCGTGCAGCCCGCGCCACGGCCGCTACCTGACCGTGGCCG  
CCGTGTTCCGGGGCCGCATGTCCATGAAGGAGGTGGACGAGCAGATGCTGAGCGTGACAGCAAGAACAGCAGCT  
ACTTCGTGGAGTGGATCCCCAACACGTGAAGACGGCCGTGTGCGACATCCCGCCCCGCGGCCTGAAGATGGCCG  
CGACCTTCATCGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCATCTCCGAGCAGTTCACGGCCATGTTCC  
GGCGCAAGGCCTTCTTGCACTGGTACACGGGCGAGGGCATGGACGAGATGGAGTTCACCGAGGCCGAGAGCAACA  
TGAATGACCTGGTATCTGAGTACCAGCAGTACCAGGACGCCACGGCCGAGGAGGGCGAGTTCAGGAGGAGGCGG  
AGGAGGAGGTGGCCTAGGCTGCTCCCATCGCTTCCCACCTGTCCCCTCGAGGCTTCTGACCTTTGATCCGCTAGG  
CCCCCATCTCTGAACCCTAGAGCCCCGCTTTCCCTCCAAGGCTGACTCCCCGCTGACCCTAACAATACCTTTGG  
AGCTCGCTTTACCTCTGGCTACTTCATCTCCGACCCTGGCTCCCCTTTGAGCCCTAATTTATCTTTAACCCCTT  
GAGCTCTTCCAACCTTGACATTCCCAGGAGGAGCCCCGCTTACCCCTTCTGACTCTGGAAACCGCACCTTTAAC  
TTTGACAGACCTTCTTACCCCTGACTTCTGCTTACCTTTGACCTCTGCCCCCATGAATCCCATTTTACCTCT  
AGACCTATAAGTTCTGGTTTATGTTTGACCCCTCCCTCTGAGCTGCACTTCACCGCTGACCTTGCCCTACCTTTA  
ACCCCCACCTGAGCCCCAGCTCCTACCTCTGACCCCAACTTCTCTTTGATCTCTGAATCCCCTCTGACTCCAAC  
TTCTCTTTCACCTCTATGAGTCCCATTTTACTTCTACACCTGCAAGTCTGTTTATATTGGACCCCTCCCTCC  
GAGCTGCAGTTCACCTTTGACCTTGCTCACCTTTACCCCCACCCCCACAGCGTCAGCTCCTACCTCTGACC  
CCAGCTTCTCTCTGATTCCACAGGCCCATGCATCCTCCCTGCCTCACTCCCTCAGCCCTGCCGACCTTAGC  
TTATCTGGGAGAGAAACAAGGCCTGGTGCCTGTGAGGAAGAGAGGTCACCCCTACCTCCCTCCCGCTTCCCTG  
CCTCACCTCAATAAATAAATTAATTGTTGTCATGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 458**

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLERINVYYNEATGGNYVPRAVLVDLEPGTMDS  
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDAVLDVVRKEAESCDCLQGFQLTHSLGGTGSGMGTL  
LISKIREEFDPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL  
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM  
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLSVQSKNSSYFVEWIPNNVKTAVCDIPPRGLKMAATFIGNSTAIQ  
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEGEFEEEEEEVA

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**FIGURE 459A**

TGAGGAATCAACAGCCGCCATCTTGTCGCGGACCCGACCGGGGCTTCGAGCGCGATCTACTCGGCCCCGCCGGTC  
CCGGGCCCCACAACCGCCCGCGCTCGCTCCTCTCCCTCGCAGCCGGCAGGGCCCCCGACCCCCGTCCGGGGCCCTC  
GCCGGCCCCGGCCGCCCGTGGCCGGGGCTGTTTTTCGCGAGCAGGTGAAAATGGCTGAGAACTTGCTGGACGGACCG  
CCCAACCCCAAAAGAGCCAAACTCAGCTCGCCCCGTTTCTCGGCGAATGACAGCACAGATTTTGGATCATTTGTTT  
GACTTGGAATGATCTTCTGATGAGCTGATACCCAATGGAGGAGAATTAGGCCTTTTAAACAGTGGAACCTT  
GTTCCAGATGCTGCTTCCAAACATAAACAACGTGTCGGAGCTTCTACGAGGAGGCAGCGGCTCTAGTATCAACCCA  
GGAATAGGAAATGTGAGCGCCAGCAGCCCCGTGACGAGGGCCTGGGTGGCCAGGCTCAAGGGCAGCCGAACAGT  
GCTAACATGGCCAGCCTCAGTGCCATGGGCAAGAGCCCTCTGAGCCAGGGAGATTCTTCAGCCCCCAGCCTGCCT  
AAACAGGCAGCCAGCACCTCTGGGCCCCACCCCGCTGCCTCCCAAGCACTGAATCCGCAAGCACAAAAGCAAGTG  
GGGCTGGCGACTAGCAGCCCTGCCACGTACAGACTGGACCTGGTATCTGCATGAATGCTAACTTTAACCAGACC  
CACCCAGGCCCTCTCAATAGTAACCTCTGGCCATAGCTTAATTAATCAGGCTTCACAAGGGCAGGCGCAAGTCATG  
AATGGATCTCTTGGGGCTGCTGGCAGAGGAAGGGGAGCTGGAATGCCGTACCCTACTCCAGCCATGCAGGGCGCC  
TCGAGCAGCGTGCTGGCTGAGACCCTAACGCAGGTTTCCCCGCAAATGACTGGTCACGCGGGACTGAACACCGCA  
CAGGCAGGAGGCATGGCCAAGATGGGAATAACTGGGAACACAAGTCCATTTGGACAGCCCTTTAGTCAAGCTGGA  
GGGCAGCCAATGGGAGCCACTGGAGTGAACCCCCAGTTAGCCAGCAAACAGAGCATGGTCAACAGTTTGCCACC  
TTCCCTACAGATATCAAGAATACTTCAGTCACCAACGTGCCAAATATGTCTCAGATGAAAACATCAGTGGAATT  
GTACCCACACAAGCAATTGCAACAGGCCCCACTGCAGATCCTGAAAAACGCAAACCTGATACAGCAGCAGCTGGTT  
CTACTGCTTCATGCTCATAAGTGTGAGAGACGAGAGCAAAGCAACGGAGAGGTTTCGGGCTGCTCGCTCCCGCAT  
TGTCGAACCATGAAAAACGTTTTGAATCACATGACGCATTGTGAGGCTGGGAAAGCCTGCCAAGTTGCCCATTTGT  
GCATCTTCACGACAAATCATCTCTCATTGGAAGAACTGCACACGACATGACTGTCCTGTTTGCCCTCCCTTTGAAA  
AATGCCAGTGACAAGCGAAACCAACAAACCATCCTGGGGTCTCCAGCTAGTGGAATTCAAAACACAATTGGTTCT  
GTTGGCACAGGGCAACAGAATGCCACTTCTTTAAGTAACCCAAATCCCATAGACCCAGCTCCATGCAGCGAGCC  
TATGCTGCTCTCGGACTCCCTACATGAACCAGCCCCAGACGCAGCTGCAGCCTCAGGTTCTGGCCAGCAACCA  
GCACAGCCTCAAACCCACCAGCAGATGAGGACTCTCAACCCCTGGGAAATAATCCAATGAACATTCCAGCAGGA  
GGAATAACAACAGATCAGCAGCCCCAAACTTGATTTGAGAATCAGCTCTTCCGACTTCCCTGGGGGCCACAAAC  
CCACTGATGAACGATGGCTCCAACCTCTGGTAACATTGGAACCTCAGCACTATACCAACAGCAGCTCCTCCTTCT  
AGCACCGGTGTAAGGAAAGGCTGGCACGAACATGTCACTCAGGACCTGCGGAGCCATCTAGTGCATAAACTCGTC  
CAAGCCATCTTCCCAACACCTGATCCCGCAGCTCTAAAGGATCGCCGCATGGAAAACCTGGTAGCCTATGCTAAG  
AAAGTGGAAGGGGACATGTACGAGTCTGCCAACAGCAGGGATGAATATTATCACTTATTAGCAGAGAAAATCTAC  
AAGATACAAAAAGAACTAGAAGAAAAACGGAGGTGCGGTTTACATAAACAAGGCATCTTGGGGAACCCAGCCAGCC  
TTACCAGCCCCGGGGCTCAGCCCCCTGTGATTCCACAGGCACAACCTGTGAGACCTCAAATGGACCCCTGTCC  
CTGCCAGTGAATCGCATGCAAGTTTCTCAAGGGATGAATTCAATTTAACCCCATGTCCTTGGGGAACGTCCAGTTG  
CCACAAGCACCCATGGGACCTCGTGACGCTCCCAATGAACCACTCTGTCCAGATGAACAGCATGGGCTCAGTG  
CCAGGGATGGCCATTTCTCCTTCCCGAATGCCTCAGCCTCCGAACATGATGGGTGCACACACCAACAACATGATG  
GCCCAGGCGCCCGCTCAGAGCCAGTTTCTGCCACAGAACCAGTTCCTCGTCATCCAGCGGGGCGATGAGTGTGGGC  
ATGGGGCAGCCGCCAGCCCAAACAGGCGTGTACAGGGACAGGTGCCGTGGTGCTGCTCTTCTTAACCTCTCAAC  
ATGCTGGGGCCTCAGGCCAGCCAGCTACCTTGCCCTCCAGTGACACAGTCACCACTGCACCCAACACCGCCTCCT  
GCTTCCACGGCTGCTGGCATGCCATCTCTCCAGCACACGACACCCTGGGATGACTCCTCCCCAGCCAGCAGCT  
CCCACTCAGCCATCAACTCCTGTGTCGTCTTCCGGGCAGACTCCCACCCCGACTCCTGGCTCAGTGCCAGTGCT  
ACCCAAACCCAGAGCACCCCTACAGTCCAGGCAGCAGCCAGGCCAGGTGACCCCGCAGCCTCAAACCCAGTT  
CAGCCCCCGTCTGTGGCTACCCCTCAGTCATCGCAGCAACAGCCGACGCCTGTGCACGCCCAGCCTCCTGGCACA  
CCGCTTTTCCCAGGCAGCAGCCAGCATTGATAACAGAGTCCCTACCCCTCCTCGGTGGCCAGCGCAGAAACCAAT  
TCCCAGCAGCCAGGACCTGACGTACCTGTGCTGGAAATGAAGACGGAGACCCAAGCAGAGGACACTGAGCCCGAT  
CCTGGTGAATCCAAAGGGGAGCCAGGTCTGAGATGATGGAGGAGGATTTGCAAGGAGCTTCCCAAGTTAAAGAA  
GAAACAGACATAGCAGAGCAGAAATCAGAACCAATGGAAGTGGATGAAAAGAAACCTGAAGTGAAAGTAGAAGTT  
AAAGAGGAAGAAGAGAGTAGCAGTAACGGCACAGCCTCTCAGTCAACATCTCCTTCGACGCCGCGCAAAAAATC  
TTTAAACCAGAGGAGTTACGCCAGGCCCTCATGCCAACCTAGAAGCACTGTATCGACAGGACCCAGAGTCATTA  
CCTTTCCGGCAGCCTGTAGATCCCAGCTCCTCGGAATTCCAGACTATTTTGACATCGTAAAGAATCCCATGGAC

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**FIGURE 459B**

CTCTCCACCATCAAGCGGAAGCTGGACACAGGGCAATACCAAGAGCCCTGGCAGTACGTGGACGACGTCTGGCTC  
ATGTTCAACAATGCCTGGCTCTATAATCGCAAGACATCCCGAGTCTATAAGTTTTGCAGTAAGCTTGCAGAGGTC  
TTTGAGCAGGAAATTGACCCTGTCATGCAGTCCCTTGGATATTGCTGTGGACGCAAGTATGAGTTTTCCCCACAG  
ACTTTGTGCTGCTATGGGAAGCAGCTGTGTACCATTCTCTCGCATGCTGCCTACTACAGCTATCAGAATAGGTAT  
CATTTCTGTGAGAAGTGTTTCACAGAGATCCAGGGCGAGAATGTGACCCTGGGTGACGACCCCTTCACAGCCCCAG  
ACGACAATTTCAAAGGATCAGTTTGAAAAGAAGAAAAATGATACCTTAGACCCCGAACCTTTCGTTGATTGCAAG  
GAGTGTGGCCGGAAGATGCATCAGATTTGCGTTCTGCACTATGACATCATTTGGCCTTCAGGTTTTGTGTGCGAC  
AACTGCTTGAAGAAAACCTGGCAGACCTCGAAAAGAAAACAAATTCAGTGCTAAGAGGCTGCAGACCACAAGACTG  
GGAAACCACTTGAAGACCGAGTGAACAAATTTTTGCGGCGCCAGAATCACCTGAAGCCGGGGAGGTTTTTGTGTC  
CGAGTGGTGGCCAGCTCAGACAAGACGGTGGAGGTCAAGCCCGGGATGAAGTCACGGTTTTGTGGATTCTGGGGAA  
ATGTCTGAATCTTTCCCATATCGAACCAAAGCTCTGTTTGCTTTTGAGGAAATTGACGGCGTGGATGTCTGCTTT  
TTTGGAATGCAGTCCAAGAATACGGCTCTGATTGCCCCCCCTCCAAACACGAGGCGTGTGTACATTTCTTATCTG  
GATAGTATTCATTTCTTCCGGCCACGTTGCCTCCGCACAGCCGTTTACCATGAGATCCTTATTGGATATTTAGAG  
TATGTGAAGAAATTAGGGTATGTGACAGGGCACATCTGGGCCGTGCTCTCCAAGTGAAGGAGATGATTACATCTTC  
CATTGCCACCCACCTGATCAAAAAATACCCAAGCCAAAACGACTGCAGGAGTGGTACAAAAAGATGCTGGACAAG  
GCGTTTGCAGAGCGGATCATCCATGACTACAAGGATATTTTTCAAACAAGCAACTGAAGACAGGCTCACCAGTGCC  
AAGGAACTGCCCTATTTTGAAGGTGATTTCTGGCCCAATGTGTTAGAAGAGAGCATTAAAGGAACTAGAACAAGAA  
GAAGAGGAGAGGAAAAAGGAAGAGAGCACTGCAGCCAGTGAACCCTGAGGGCAGTCAGGGCGACAGCAAGAAT  
GCCAAGAAGAAGAACAACAAGAAAACCAACAAGAACAAAAGCAGCATCAGCCGCGCCAACAAGAAGAAGCCCAGC  
ATGCCCCAAGTGTCCAATGACCTGTCCAGAAAGCTGTATGCCACCATGGAGAAGCACAAGGAGGTCTTCTTCGTG  
ATCCACCTGCACGCTGGGCCTGTCTATCAACACCCTGCCCCCATCGTCGACCCCGACCCCTGCTCAGCTGTGAC  
CTCATGGATGGGCGCGACGCTTCTCTACCCCTCGCCAGAGACAAGCACTGGGAGTTCTCTCTCTGCGCCGCTCC  
AAGTGGTCCACGCTCTGCATGCTGGTGGAGCTGCACACCCAGGGCCAGGACCGCTTTGTCTACACCTGCAACGAG  
TGCAAGCACCCAGTGGAGACGCGCTGGCACTGCACTGTGTGCGAGGACTACGACCTCTGCATCAACTGCTATAAC  
ACGAAGAGCCATGCCATAAGATGGTGAAGTGGGGGCTGGGCCTGGATGACGAGGGCAGCAGCCAGGGCGAGCCA  
CAGTCAAAGAGCCCCCAGGAGTCACGCCGGGTGAGCATCCAGCGCTGCATCCAGTCGCTGGTGCACGCGTGCCAG  
TGCCGCAACGCCAACTGCTCGCTGCCATCCTGCCAGAAGATGAAGCGGGTGGTGCAGCACACCAAGGGCTGCAAA  
CGCAAGACCAACGGGGGCTGCCCGGTGTGCAAGCAGCTCATCGCCCTCTGCTGCTACCACGCCAAGCACTGCCAA  
GAAAACAAATGCCCCGTGCCCTTCTGCCTCAACATCAAACACAAGCTCCGCCAGCAGCAGATCCAGCACCGCCTG  
CAGCAGGCCCCAGCTCATGCGCCGGCGGATGGCCACCATGAACACCCGCAACGTGCCTCAGCAGAGTCTGCCTTCT  
CCTACCTCAGCACCGCCCCGGGACCCCCACACAGCAGCCCAGCACACCCCGACGCGCGAGCCCCCTGCCAGCCC  
CAACCCTCACCCGTGAGCATGTACCCAGCTGGCTTCCCCAGCGTGGCCCGGACTCAGCCCCCACCACGGTGTCC  
ACAGGGAAGCCTACCAGCCAGGTGCCGGCCCCCCCCACCCCGGCCAGCCCCCTCTGCAGCGGTGGAAGCGGCT  
CGGCAGATCGAGCGTGAGGCCCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGC  
CGCACGGGCATGGGGACCCCGGGGAGCCAGATGGCCCCCGTGAGCCTGAATGTGCCCGGACCCAACCAGGTGAGC  
GGGCCCCGTATGCCAGCATGCCTCCCGGGCAGTGGCAGCAGGCGCCCCCTTCCCCAGCAGCAGCCCATGCCAGGC  
TTGCCCAGGCCTGTGATATCCATGCAGGCCCAGGCGGCGCTGGCTGGGCCCCGGATGCCAGCGTGCAGCCACCC  
AGGAGCATCTCACCCAGCGCTCTGCAAGACCTGCTGCGGACCCTGAAGTCGCCCAGCTCCCTCAGCAGCAACAG  
CAGGTGCTGAACATTCTCAAATCAAACCCGCAGCTAATGGCAGCTTTCATCAAACAGCGCACAGCCAAGTACGTG  
GCCAATCAGCCCCGGCATGCAGCCCCAGCCTGGCCTCCAGTCCCAGCCCCGGCATGCAACCCAGCCTGGCATGCAC  
CAGCAGCCCAGCCTGCAGAACCTGAATGCCATGCAGGCTGGCGTGCCGCGGCCCGGTGTGCCTCCACAGCAGCAG  
GCGATGGGAGGCCTGAACCCCCAGGGCCAGGCCTTGAACATCATGAACCCAGGACACAACCCCAACATGGCGAGT  
ATGAATCCACAGTACCGAGAAATGTTACGGAGGCAGCTGCTGCAGCAGCAGCAGCAACAGCAGCAGCAACAACAG  
CAGCAACAGCAGCAGCAGCAAGGGAGTGCCGGCATGGCTGGGGGCATGGCGGGGCACGGCCAGTTCCAGCAGCCT  
CAAGGACCCGGAGGCTACCCACCGGCCATGCAGCAGCAGCAGCAGCGCATGCAGCAGCATCTCCCCCTCCAGGGCAGC  
TCCATGGGCCAGATGGCGGCTCAGATGGGACAGCTTGGCCAGATGGGGCAGCCGGGGCTGGGGGCAGACAGCACC  
CCCAACATCCAGCAAGCCCTGCAGCAGCGGATTCTGCAGCAACAGCAGATGAAGCAGCAGATTGGGTCCCCAGGC  
CAGCCGAACCCCATGAGCCCCCAGCAACACATGCTCTCAGGACAGCCACAGGCCTCGCATCTCCTGGCCAGCAG

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**FIGURE 459C**

ATCGCCACGTCCCTTAGTAACCAGGTGCGGTCTCCAGCCCCTGTCCAGTCTCCACGGCCCCAGTCCCAGCCTCC<sup>1</sup>  
CATTCCAGCCCGTCACCACGGATACAGCCCCAGCCTTCGCCACACCACGTCTCACCCCAGACTGGTTCCCCCCAC  
CCCGGACTCGCAGTCACCATGGCCAGCTCCATAGATCAGGGACACTTGGGGAACCCCGAACAGAGTGCAATGCTC  
CCCCAGCTGAACACCCCCAGCAGGAGTGCGCTGTCCAGCGAACTGTCCCTGGTCGGGGACACCACGGGGGACACG  
CTAGAGAAGTTTGTGGAGGGCTTGTAGCATTGTGAGAGCATCACCTTTTCCCTTTCATGTTCTTGACCTTTTGT  
ACTGAAAATCCAGGCATCTAGGTTCTTTTTATTCCCTAGATGGAAGTGCAGACTTCCGAGCCATGGAAGGGTGGATT  
GATGTTTAAAGAAACAATACAAAGAATATATTTTTTTTGTATAAAAACCAAGTTGATTTAAATATCTGGTCTCTCTCT  
TTGGTTTTTTTTTTGGCGGGGGGGTGGGGGGGGTCTTTTTTTTTCCGTTTTGTTTTGTGTTGGGGGAGGGGGGT  
TTGTTTGGATTCTTTTTGTCTGTCATTGCTGGTGACTCATGCCTTTTTTTAAACGGGAAAAACAAGTTCATTATATT  
CATATTTTTTATTTGTATTTTCAAGACTTTAAACATTTATGTTTAAAAGTAAGAAGAAAAATAATATTCAGAACT  
GATTCCTGAAATAATGCAAGCTTATAATGTATCCCGATAACTTTGTGATGTTTCGGGAAGATTTTTTCTATAGT  
GAACTCTGTGGGCGTCTCCAGTATTACCCTGGATGATAGGAATTGACTCCGGCGTGCACACACGTACACACCCA  
CACACATCTATCTATACATAATGGCTGAAGCCAAACTTGTCTTGAGATGTAGAAATTGTTGCTTTGTTTCTCTG  
ATAAACTGGTTTTAGACAAAAAATAGGGATGATCACTCTTAGACCATGCTAATGTTACTAGAGAAGAAGCCTTC  
TTTTCTTTCTTCTATGTGAACTTGAAATGAGGAAAAGCAATTCTAGTGTAATCATGCAAGCGCTCTAATTCCT  
ATAAATACGAACTCGAGAAGATTCAATCACTGTATAGAATGGTAAAATACCAACTCATTTCTTATATCATATTG  
TTAAATAAACTGTGTGCAACAGACAAAAAGGGTGGTCCTTCTTGAATTCATGTACATGGTATTAACACTTAGTGT  
TCGGGGTTTTTTGTTATGAAAATGCTGTTTTCAACATTGTATTTGGACTATGCATGTGTTTTTTCCCATTTGTAT  
ATAAAGTACCGCTTAAAATTGATATAAAATTACTGAGGTTTTTAACATGTATTCTGTTCTTTAAGATCCCCGTAA  
GAATGTTTAAGGTTTTTATTTATTTATATATATTTTTTTGGTCTGTTCTTTGTAAAAAAAAAAAAAAAAA



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**FIGURE 460**

MAENLLDGPPNPKRAKLSSPGFSANDSTDFGSLFDLENDLPDELIPNGGELGLLNSGNLVPDAASKHKQLSELLR  
GGSGSSINPGIGNVSASSPVQQGLGGQAQGPNSANMASLSAMGKSPLSQGDSSAPSLPKQAASTSGPTPAASQA  
LNPQAQKQVGLATSSPATSTGTGPGICMNAFNQTHPGLLNSNSGHSLINQASQGQAQVMNGSLGAAGRGRGAGMP  
YPTPAMQGASSSVLAETLTQVSPQMTGHAGLNTAQAGGMAKMGITGNTSPFGQPFSSQAGGQPMGATGVNPQLASK  
QSMVNSLPTFPTDIKNTSVTNVPNMSQMOTSVGIVPTQAIATGPTADPEKRKLIQQQLVLLLHAHKCQRREQANG  
EVRACSLPHCRTMKNVLNMTHTCQAGKACQVAHCASSRQII SHWKNCTRHDPCVCLPLKNASDKRNQQTILGSPA  
SGIQNTIGSVGTGQONATSLSNPNPIDFSSMQRAYAALGLPYMNQPQTQLQPVPGQPPAQFQTHQQMRTLNLPLG  
NNPMNIPAGGITTDQQPPNLISESALPTSLGATNPLMNDGSGNSGNI GTLSTIPTAAPPSSSTGVRKGWHEHVTQDL  
RSHLVHKLVAIFPTPDPAALKDRRMENLVAYAKKVEGDMYESANSRDEYYHLLAEKIYKIQKELEEKRRSRLHK  
QGILGNQPALPAPGAQPPVIPQAQFVRPPNGPLSLPVNRMQVSQGMNSFNPMSLGNVQLPQAPMGPRAASPMNHS  
VQMNMSGSVPGMAISPSRMPQPPNMMGAHTNNMAQAPAQSQFLPNQFPSSSGAMSVGMGQPPAQTVGSQGOVP  
GAALPNPLNMLGPQASQLPCFPVTQSPLHPTPPPASTAAGMPSLQHTTTPPGMTPPQPAAPTQPSTPVSSSGQTPT  
PTPGSVPSATQTQSTPTVQAAAQAQVTPQPQTPVQPPSVATPQSSQQOPTPVHAQPPGTPLSQAAAASIDNRVPTP  
SSVASAETNSQQPGPDVPVLEMKTETQAEDTEPDPGESKGEPRSEMMEEDLQGASQVKEETDIAEQKSEPMEVDE  
KKPEVKVEVKEEEESSNGTASQSTSPSQPRKKIFKPEELRQALMPTLEALYRQDPESLPFRQPVDPQLLGIPDY  
FDIVKNPMDLSTIKRKLDTGQYQEPWQYVDDVWLMFNNAWLYNRKTSRVYKFCSKLAEVFEQEIDPVMQSLGYCC  
GRKYEFSPTLCCYQKQLCTIPRDAAYSYQNRHYFCEKCFTEIQGENVTLGDDPSQPQTISKDQFEKKKNDTL  
DPEPFVDCKECGRKMHQICVLHYDIIWPSGFVCDNCLKKTGRPRKENKFSAKRLQTTTLGNHLEDVRNKFLLRRQN  
HPEAGEVFVRVVASDDKTVEVKPGMKSRFVDSGEMSESFYRTRKALFAFEEIDGVDVCFFGMHVQEYGSDCPPPN  
TRRVYISYLDLSIHFFRPRCLRTAVYHEILIGYLEYVKKLGYVTGHIWACPPSEGDDYIFHCHPPDQKIPKPKRLQ  
EWYKMLDKAFAERI IHDKYKDIKQATEDRLTSAKELPYFEGDFWPNVLEESIKELEQEEEEERKKEESTAASETT  
EGSQGDSKNAKKKNNKTKNKNKSSISRANKKKPSMPNVSNLDSQKLYATMEKHKEVFFVIHLHAGPVINTLPPIV  
DDEPLLSCDLMDGRDAFLTALDKHWEFSSLRRSKWSTLCMLVELHTQGQDRFVYTCNECKHHVETRWHTVCED  
YDLCINCYNTKSHAHKMKVWGLGLDDEGSSQGEQSKSPQESRRVSIQRCIQSLVHACQCRNANCSLPSCQMKR  
VVQHTKGCKRKTINGGCPVCKQLIALCCYHAKHCQENKCPVPFCLNIKHKL RQQQIQHRLQQAQLMRRRMATMNTR  
NVPQQSLPSPTSAPPGTPTQQPSTPTQPPAQFQPSPVSMSPAGFPSVARTQPPTTVSTGKPTSQVPAPPPPAQ  
PPPAAVEAARQIEREAQQQHLRYVNINNSMPPGRTGMGTGSGMAPVSL

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**FIGURE 461A**

GAGGATGCAGAGTGGGAGACCTTAAAAACCGTCTGATCTGGCTGCTAAAGCGAGTGTCTGACGACCACCCATTAAC  
ACCAGCGAGTAGCGTTTGTCTACGGCTTTAGGATAAGAAGCCTGGAAATGGTCCCCCCTCCGCCGGGAGAAGAAAG  
CCAGACGGTCATCCTTCCACCTGGCTGGCAGAGCTACCTGTGCCTCAGGGCCGGCGGTACTATGTCAACACGAC  
CACCAATGAGACCACCTGGGAACGTCCAGCAGTTCTCCTGGGATTCCAGCCAGCCCTGGCTCTCACAGGAGCTC  
TCTGCCTCCAACAGTGAATGGATAACACGCATCAGGGACCCAGCGCACCCCTCCAGAGACTGCCACATGAGTGT  
CCGAAAATCCACCGGTGATTCCCAGAACCTGGGATCCTCATCGCCAAGCAAAAAGCAGAGCAAGGAAAACACCAT  
CACAATAAACTGTGTGACGTTCCCTCACCCAGACACGATGCCGGAACAGCAGCTGCTGAAACCAACCGAGTGGAG  
CTACTGCGACTACTTCTGGGCTGATAAGAAGGACCCCCAAGGCAACGGCACGGTGGCTGGGTTTGAATACTGCT  
CCAGAAACAGCTGAAGGGCAAACAAATGCAGAAGGAAATGTCAGAATTCATCCGGGAAAGGATAAAGATTGAAGA  
AGACTATGCGAAGAACTTAGCTAAGCTCTCTCAGAACTCCTTGGCTTCACAGGAGGAAGGCTCCTTGGGAGAGGC  
GTGGGCCCAGGTGAAGAAGAGCCTGGCGGACGAAGCAGAAGTTCACCTCAAGTTCTCTGCCAAGCTTCACAGCGA  
GGTGGAGAAGCCCCTGATGAACCTCCGTGAGAACTTCAAGAAAGACATGAAGAAGTGCAGACCACCACATTGCCGA  
CCTTCGCAAGCAGCTCGCCAGCCGCTATGCCTCGGTGGAGAAGGCCCGAAAGCCCTCACAGAGCGGCAGAGAGA  
CCTGGAGATGAAGACCCAGCAGCTGGAGATCAAGCTGAGCAACAAGACAGAGGAGGACATCAAGAAGGCGCGGAG  
AAAGTCCACACAGGCTGGAGACGACCTCATGCGCTGTGTGGATCTCTACAACCAGGCCCAGTCCAAATGGTTTGA  
AGAGATGGTGACCACCACATTGGAGCTAGAGCGGCTGGAGGTGGAGAGGGTAGAGATGATCCGGCAGCACCTGTG  
CCAGTACACGCAGCTGCGGCATGAAACAGACATGTTCAACCAAAGCACAGTCGAGCCCCGTGGATCAGCTGCTTCG  
AAAAGTGGACCCGGCCAAAGACAGGGAGCTGTGGGTGAGAGAGCACAAGACGGGCAACATCCGCCCTGTGGACAT  
GGAGATCTAGATGGGCCTGTGCAGCTTCGGGGGGTCTGCTGGGGAGGGGGGCTGGGCTCCCACCATGGGGCCCA  
TGCCGAGTGGATGCCCCCACCCTCTCTCCTGGGCCACTGAGGAGAGGGGAGAGAGCTGGTGATTCCAGAAGGGT  
GACCCGGACAGCCTAGCTGGGGGCTCCCCCATATTCCAGGCCCAGAAGACAGACCCACAGCCCTGCCCTTGTCT  
CTGAGGCTGAAGACCCCCTGACTCCCATGCTGTGCTTGCCGCTCTGAAACAAACAGAGGCTGGAACCTTGTGGTC  
CTTGCCGAGTTTTGTAGGGGTCACTGTACATGCTTGTGCCCTGGAAGCCCCAAGGCTCTTCCCTCAGCTGGCTC  
CCTTGTCTCCAGGGCTTTGGAGGATCAGGGTAGGGAGGGCTCTGTCTCTAAGCCAGGTGTGAGATCAGAATCAT  
GGGTAGAAGGTGCCATTGAGCTCACAGCCGCACCCAGAATCCTTTGCAGCCCTCCTTCTTTATTTTTTTCCCAT  
GCATTCTGGGAGTCCACATCTGGCTTTCTCAGCCACTGTTTCATCACCAGGGGTTTTAGGAGGAAGGCTTGGCTCC  
TGCTTTCCAGACCCACCATGCCTGGAGAGGTGAGGATGGAATACCTCATTTCGGCAAATTAGCCCCAAATTGAG  
CGCTGAATCGTGTCCCATGAGATCAGGCGCCATCTGTAAAGTCTCCTCTGGAAATGCCAATCCATCCTTCCCCCA  
GCTGCTTCTCGGGGAGGCCCCCTGCCCCCACCCTGCCAGCCCTTCCCAGTCTCATTAGAGGAAGCTTTCCAAAGT  
TCTCAGTTATCAAGACCTCATCCAGCTCGTCCAAAGGCTTCAGGGATGGAACAAACCAGCTCGTCTCAGAGGCC  
AGCAAGCTGGGGCCTGTCCGCCACGGTGCCCTGTGCACCTTTGGGTGCCCTGGCCCCCACTCTCCCGGGCCGCC  
CACCACAGGCTCTTAATGGGGCCGGGTGAGTCTACATGTGAGATGGGTAGGGCAAGTCTTTGCCATCCCCCAG  
ATGGCTCTGTCTTCTTGTGTATGGCAGGGCTGGGACTGCTGTCCCTTGTACAGTTTTCTGTCACTGGTGGGCACT  
GGACAGGCATAGCAGACTCTCTTGTGGCCACACTAGGTTGTGCCTTTTCAGGCAGTGTCCCGCCACCTTTGCTTC  
CCGCTCCTTCTGGACATTCCAGAGCCCTGCACCAAACCCCTTACTTGGTGTCTGCACCTCCTTTCCCTCTCTCCAT  
CTTCCAATCCCTGGAAGTCTGGTCTGAGTGTGACTTGGGAAGCTTTTCAGTGTCTGCTGTTTGGCCAGCTCATT  
ACTTTCTCCCTTTCTCTACACAGCAAACACATTCTCCACCATGTGAGTCTAAAGAGTCTAAAGGGGCCGGGAGA  
AGCATGAGCGAGGGGCAGATTCTAGTCGGGAGCCCCATGCCCTGGAATCCATCTTTCTTTCATCTTTCCCATTGAC  
CACTTTGGGTTTGACCTGCACATCTGCAGTGAGGGCAGAATTCACAAGCACAACTCACTGGTCTTTTCAGTCAAC  
GTGCTAGAAACCGATGACTTATTAATCTCTAATTTTTTGGCGCCTCTTTCATTGAATGAGAATTGCTTTTCGTATA  
GTTACATTAGAAAAATGCCTAATATACTAAAGTAAACCAAACGTTGTCACTTTTCTCTTGTCTTGAACATTG  
CAACCAAAAAGGTGAGCACAAGGCCTTACCTACGTGAAGACCTCCTGGTAGGATCTGTCCATGGGATGGAGAA  
CCACTCTGTCCAGATCTGGGGTTGGGTGATGACACCAGCTACCAATTTTAGAATATTATTTCTTGGTTTCTTTAT  
GAAAAATGGGTGCTAGTGGTAATTGCTTTGTGGCTTAGTAACTACTCTGTGGATGATTTCCAAACATTCAAAGC  
CAATAGCCTTGTATTATAACAAGATATTTTGAAGTACAATATGGCTCATTGACTTTTCATTACATCTGAGGATTCC  
AGAGTCTCTGTTTCATCCCTGGGATAGAGTGAGCCCTCTTGCCTCTTCCAGGGTAGCTCAGGTTGGCCAGTTTG  
GGCCAGTCCATTTTTGGAGGTCACTCTTTCCCCCTCATCCCTCACCTCCTTCTCTTTACCCCCCTTACGTACT  
TCCTTTCTTTCTTCCCTCTGTTATTTCATTTCATCAAGCAGGTTAAAGCCATTGTGCTAAGATCTAATCTGAGGACA

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**FIGURE 461B**

CTATAATGGCCCTGTCGTCAGGGAAGCCCGTGATCGCTCGTTTTTCAGGGGTCTTACCGGTCAGCAACCTTGGCAT  
TGATACATAGGCACTCTACAGAATTTAAGTTTTTCAGAGGTAAGTCTGTTGTTCTGATTAATCTGCATTTCATTACAG  
CGAATGCTCAAGACAAGCCAGGCATGCTGAGAAGCGGCGCTCTAGTTGTATGTAAGATGGGCATTCCCTCTGCTCT  
CCTCTATTCTCCATGTGCGACTGAGAAGAGTATAATAAGAACATTGTACCCTCTCCACACTTAACCCCTGGGATT  
CTTTATTATAATATAAAACCACCGTCGTGAGGCATTTACCTGTTGGATGGAAGGTAGACAGCAACAAGATTTTAAAT  
CACCTGGTCACCAGACCCTCACGGCCCATATCCAATTCGAATTTTCAGAAATTTCTCTGTTTGCTTTAAATAACTC  
TTTACAAATAAGGGTCGGGCACGGTGGCTCACGCCGTGAATCCCAGCTCTTTGGGAGGCCGAGGTGGGCAGATCA  
CGAGGTCAGGAGATCGAGACCATCCTGGCTAACATGGTGAAACCCCGTCTCTGCTAAAAATACAAAAAATTAGCC  
AGATGTGGTGGTGCACACCTGTAGTCCCACTATTCGGCAGGCTGAGGCAGTAGAATCGCTTGAACCTGGGAGGC  
GGAGATTGCAGTGAACCAAGATCGGGCCACTGCCTCCAGCTTGGGTGACAGAGCAAGACTCCATCTCAAAAAA  
TTATAAATAACTCTTTGCAATAGGAAAGTGAAGCTCAAGGGTAACCAGTGAGGCTATGAAATTGCCAGTGAATT  
AAGACCAGGGCTAGAGTCAACAGTCCAGAACCCTATCCGTATGAACAGGGGGCCGTTTCTGGTTGAAATCAAGG  
TTAGGATGCAACTGAGAAAATAAAAGACTGCCTTTGGAGAGGCAAGCACGCTATCCGGGTTGTTGTTTTGTTTT  
ATGCTTTGGTGTCTTAGGTGAGGACTTAGCTGGGTTTATTCAAAGTGGGCGGGTCTGGGCTATTCTTGAGAATGTC  
CCTTCCATTTCTGAGAACAAGTCAGCCCTTCTACCTGCCTCCACCCAGGAGACTGATGCACAAGATCTGTTTGT  
GAAAGCCTGATTTAAAAAGAAAAAAATTCCTTAAGCCAAATGGTGTTCGAAGTTGGTTGCTGTGACAACCTC  
CAGGAAGAGCCACTTGTTACCCTCTATTCTTTCTAGTGCCTTCAGTCAGTGGCAACACATAGGCCCTTGGACCG  
TGGGGATGGCGGCCCTGAGATTCTGTCACTGGGACCACCTGGGCCTCCTTTCTACCTCCACTCAGCACCTGTT  
GGCCAAGGAGAATTTCTGCGGTGGGAGGCAGTGCTCTGCTAGTCAGGATTGATAAACAGCTGGGCACACCGAAC  
AGTGTACCAACGAATTCACCAACCAGGGGTTTCTTTCCCTACCCTTTGTGAAAACCAATCAATTACTAGATGAGT  
GGATGGATGCAGAAAAATCTGGGCTGAGCCAAAGTCCCTTTTGGAAATACAAGCCATAACATTGCAAGGACATCA  
GCGACCTTGGCTTGTTTAGGTGATTTTACTTCCAGCTGCAGGTAGTCTTGACAAGGAGTGTTTAAACAGAAGGCT  
CAAGATGCATTCCCTTGTTAGGTGCGGAGAGAGCACTTCTAATGTTAAGTGGGGTACAGATCAGCTGCCCCCCCAC  
GTAGCCTGGACATCGTCTTATCCCATAATCCTTGCCATCCCTACAAGGCCCATCGCCACCACCTTTTCCAGGT  
TTATTGAGGTATGATTGACATCCAGTAAAATTCACCCCTTGGAATATACAGCTCTGTGAATTTTGACAAATTTA  
GTGTCTTGTGACCATCACCAAGATCAACCTGTTTTTAACCTCCAAAAAATTCCTTCTCCTGCCCTCTTTCCCT  
GGCAACCTGATTGATTATCTGATCCTATAATTTTGCCCTTTCTAGAATGTCATATAAATGGAGTCACACTGATG  
TCGCCCTTTGAGTCTGGCATCTTTCCCTCAGCTTAATGCTTTTGAGTCATTTCATGATGTGTGCGTGTGGTTTGT  
CCTTCTCCTTGCCGGGAAGTATTTTCATTGCATGGGCGTACTACTCTGCTTCTTTATTTTACACTGAGCCTTTCG  
CCCTGGAAGTTCTTGGCCCAGGGTCTTCACTTGTTTGCACGACCACTTCCAGCTTGCTGCTTCCCTCAGTTCCC  
CAGGCTCCTCCTCAAATGCCAGCTGTGCCACAAAGCTGTTCTTAGGGCTCACACTCGCCTTTTGGCGCGTGGTG  
GGTTTTTGGTAGTGCAGAAAGAATCCAGGGATGGGAGGGGAAGGGACGGATGGGTGCTCAATTGCTGCTCACGTC  
TGCTGCAACCTGAAGCTTGCATCTCAGCCAGCAGATCTGCTCCCTTCTGGGACCCAGGCTTCAGTGTACACGGT  
CCTTGGCTATGTATTGGGCGTTGGAGGCTTTGAAAGGCGAGCAGAAGCAGCATGGACAAGAAGGCTGGGGCTGGC  
CCTGGGGCTCATCATGATGCTTCTTGATCTGTTGCTTCATCTGCAAGCTGAGGGTGTGTTGTTCTAGATGAGTG  
TCTCAGGCCACCGCAACTGCATGTACCTCCTCCCTTTCTCATTTCCAATGATGTACCCTGTACACGTGTTTCATG  
CTGTGTCTGGCTCTCATCTGCACAATCGTGCATAGAATTGCCTCAAGTCTGGTGAGAGAGATGCCGTGGTACTT  
TTCCATTTAGATTCAAATGGAGCTAAAATTAAGAGTTTTATGAGCTGTTAAGAATGAGGTAGTTTCTCCTAGGAC  
CCCCAAAGACAGTGCAAGTAATGACCGTTTGGATCTCATTCGTCGATCTTTGATAGTATGTTCTGGAGTCTACT  
CCCCAGGAGCCAGGACAGGCGTGAAGATGGAGTCCTTGTCGCGAGCTGGAGCCTTGCCCTAGCTGGTGATCACACAG  
CCTGGCCTGTACCTGCACCCCACTGGATGGTGGTACATGGTGGCAGGGACAGGACCACCCAGTTAAGGCCAGA  
CCAGGCTGAGTGTGACCCCTGAGGTAAACACTCCACTAAGCTGTGTCTTGTTTCATGCCCCCTGCTCAGTGAAAGG  
TGAGTCCCAGAGACCAGTTGGGTACCTCTCTATGCGAACCAGAGACATTTCTGGATCCAGGCCAGGTGAAGATTAG  
GGCCAGGAAGCCTGAGCCCCCGGGGCTCAAGGTAGGGAGCCGAAGAGGCTGCCAGGACTCTGCTGGGTTGAAAT  
TTGCCGGGGAGGACTCTTGCTCCCCCTCAGGAGTATTTTTGTTGAGGCTTTCCTGGAGGTGAAGAAGCAATTCC  
CATTGCAGCAGGTTAGAGCGAGAATCAGACAGAGGGCAAAAACCAATTCGCTTCTCCCCACGTTCTAAATGCTGG  
GGCATGGCTGTCAAGGAGGCTTCCCTGGGAGGTGTCTCTGGGGGTGGGGTGAGGTTGGGGCGATGGCCTTTGGAGA  
TTGCGTGTGGTGTTCAGGACTGTTCCCTGGTGTTTGGAGGAACTTTAGTGGGATTGCAGTGAATGTAAGGTCA

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**FIGURE 461C**

GGGCACGTGGGTGCTCTCTCGGGGTGGGGTGACTGGGAGACCTAGAGGGAAAGCCTGCTATGCAGGGGGAGAGCA  
CAGGACTGGCCCTGCTCTGCGGCCTCCTTTGTCCCATAACCTGAAGTTAAGTCACATCCCCTGTCGGGACCTCCG  
TGCACTCATCTGTCAAGTGGGGGCGCTTCCCTTCCAGCATCACCTGCAGCAGACGGGCTCTCGGGAGTCGTGGGT  
TCCAGGCAGCTGTGTGGACCCAGGGACAGACATTCAAAGGGACGCCAGCCATCCTTAGTGACAGGGGCCCAACT  
TAGCATCCCTTCCCTTCCGTTAGGAAGGAGATGACCGGAAGCAACCCCTTCACAGACACGAGCACATCGGCAAAC  
CCTATGAAAGTGGAATTTTCTAACAAAATAAACTTGCTTGTTTGATCTGTTTTCTGTAACTTTGTCTAAATACTT  
TATACATTTTTCATGTTAAAGAGCCGTGTCTCCCGCCAGCACTCCTCACCCCGGTATGAATGTGTTTCTCCACA  
TTGTATATCCTTCCACCCTCTGGCTGCCTAGATCAGTAAATAAAATTGATGTAATATAATTTATAAGTAACACTG  
TTGAAACCCTGATCCCAGTGGAGGCTGTAACCCACCTGCCCCCGCACCACCCCTGACCCCTGTTACCGCATTT  
GTGTGTATTAAATGCTGAAGAATTAAATGTTTAAAGAGTTTAAATTTTGAAGGCGTTTGCTATATACAGTTGTCCT  
GCATTATTATAAAGAGTTTTTCAGGAAGTT

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**FIGURE 462**

MVPPPPGEESQTVILPPGWQSYLSPQGRYYVNTTTNETTWERPSSSPGIPASPGSHRSSLPPTVNGYHASGTPA  
HPPETAHMSVRKSTGDSQNLGSSSPSKKQSKENTITINCVTFPHPDMPQQLLKPTWESYCDYFWADKKDPQGN  
GTVAGFELLLOKQLKGKQMQKEMSEFIRERIKIEEDYAKNLAKLSQNSLASQEEGSLGEAWAQVKKSLADEAEVH  
LKFSAKLHSEVEKPLMNFRENFKKDMKKCDHHIADLRKQLASRYASVEKARKALTERQORDLEMKTQQLEIKLSNK  
TEEDIKKARRKSTQAGDDLRCVDLYNQASQKWFEEMVTTTLELERLEVERVEMIRQHLCQYTLRHETDMFNQS  
TVEPVDQLLRKVDPKDRDLWVREHKTGNIRPVDMEI

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**FIGURE 463**

TGCGACGTGACTGGCTAGCTGCGTGGGTACTGGAACAAGCAAACGAGGCAGCGAGCGAAGGACGGGAGCCGGACC  
CTGGGCCCCGTGGAACCTCCAGCCTGCGCCACCACGTCACGCACACGCTCGGCGCTGCGATCCGCGCATATAACGA  
TATTTGGATTTGACCTGCATTTTGAATTTATCTACACTTAAATGCCACCAGCAGTTGGAGGTCCAGTTGGATA  
CACCCCCCAGATGGAGGCTGGGGCTGGGCAGTGGTAATTGGAGCTTTCATTTCCATCGGCTTCTCTTATGCATT  
TCCCAAATCAATTACTGICTTCTTCAAAGAGATTGAAGGTATATTCCATGCCACCACCAGCGAAGTGTATGGAT  
ATCCTCCATAATGTTGGCTGTCATGTATGGTGGAGGTCTTATCAGCAGTATCCTGGTGAATAAATATGGAAGTCG  
TATAGTCATGATTGTTGGTGGCTGCTTGTGAGGCTGTGGCTTGATTGCAGCTTCTTTCTGTAACACCGTACAGCA  
ACTATACGTCGTATTGGAGTCATTGGAGGTCTTGGGCTTGCCTTCAACTTGAATCCAGCTCTGACCATGATTGG  
CAAGTATTTCTACAAGAGGCGACCATTGGCCAACGGACTGGCCATGGCAGGCAGCCCTGTGTTCTCTGTACTCT  
GGCCCCCTCAATCAGGTTTTCTTCGGTATCTTTGGATGGAGAGGAAGCTTCTAATTCTTGGGGGCTTGCTACT  
AAACTGCTGTGTTGCTGGAGCCCTCATGCGACCAATCGGGCCCAAGCCAACCAAGGCAGGGAAAGATAAGTCTAA  
AGCATCCCTTGAGAAAGCTGGAATCTGGTGTGAAAAAGATCTGCATGATGCAAATACAGATCTTATTGGAAG  
ACACCCTAACAAGAGAAACGATCAGTCTTCCAAACAATTAATCAGTTCCTGGACTTAACCTATTACCCACAG  
AGGCTTTTTGCTATACCTCTCTGGAATGTGATCATGTTTTTTGGACTCTTTCACCTTTGGTGTCTTAGTAG  
TTATGGGAAGAGTCAGCATTATTCTAGTGAGAGTCTGCCTTCCTTCTTCCATTCTGGCTTTTGTGACATGGT  
AGCCCGACCATCTATGGGACTTGTAGCCAACACAAAGCCAATAAGACCTCGAATTCAGTATTTCTTTGCGGCTTC  
CGTTGTTGCAAATGGAGTGTGTCATATGCTAGCACCTTTATCCACTACCTATGTTGGATTCTGTGTCTATGCGGG  
ATTCTTTGGATTTGCCTTCGGGTGGCTCAGCTCCGTATTGTTTGAACATTGATGGACCTTGTGGACCCAGAG  
GTTCTCCAGCGCTGTGGGATTGGTGACCATTGTGGAATGCTGTCTCTGCTCCTGGGGCCACTTTTAGGTCTG  
GCTCAATGACATGTATGGAGACTACAAATACACATACTGGGCATGTGGCGTCGTCCTAATTATTTAGGTATCTA  
TCTCTTCATTGGCATGGGCATCAATTATCGACTTTTGGCAAAGAAGCAAGCAACGAGCAGAAAAAGGAAAG  
TAAAGAGGAAGAGACCAGTATAGATGTTGCTGGGAAGCCAAATGAAGTTACCAAAGCAGCAGAATCTCCGGACCA  
GAAAGACACAGAAGGAGGGCCCAAGGAGGAGGAAAGTCCAGTCTGAATCCATGGGGCTGAAGGGTAAATTGAGCA  
GTTTCATGACCCAGGATATCTGAAATATTCTACTGGCCTGTAATCTACCAGTGGTGTCTCAATGCAAATAGTAGAC  
ATTTGTGTGGAATCATACCAGTTGTTTATTGATGGGATTTTTGTTTACTCCTTACCAATAGCCTGAATTTGAG  
GAGGGAATGATTGGTAGCAAAGGATGGGGGAAAGAAGTAGGTTCTGTTTTGTTTTGTTTTAATCTTAGCTTTTAA  
TAGTGTCATAAAGATTATAATATGTGCCTTAAGTTTTAGTCTTTAGAACTCTAGAGAGCCTTAACCTCTTAAACC  
ATTTTTGCTGAATTCATCTATTTTCGAGTGTGTGTTAAAGGAAAAATAACAATACTTGTGTTGAGGCAAAATCT  
AAAATTTAAATTAATCTTGCTTCATTGTTACATGTAATATATTTTCAGACATTTTCACTGGAAGATTTATGAACA  
GAAATATTGGTTGAAAGTTAGAGATTTTACAAAATGCTGACAAAAATATTTTCTAGCATCAGTAGATTTCTGGC  
ATATGTTTCTGCTAGCTATATATTTAGGAAATTCAAAGCATAAACCTTTGGCAACATCTTGGCTGTTCTAGACAC  
AGTGTACTTGTCAACCCCTCTCAGGTACCTTTTCTTGGGATGCTTATTAGAAGCCAAGTAAAGTGCTTAAGGTTT  
GTTTTTATTAAATTAGCTATTTCTGCTCCCTGTTCAAAGATGCATTTTGAGTGTATATAGATCACTGCCCTTTT  
TGAAATCACCTGGTATTATTTTCTTACTGGAAGGTTAGTATTAATCTACAGAACTACATATTTGTGCTCC  
TTGGTAAATACAACACATCTAATTAAATGTAGACAGATATTTCAAACATCAGCTGAATTCACCTTAAGTTTTTCCA  
AAACCTCAGTTAAACTGTGAAGCTATTGGAATTTTTTTTTTCTTGGAAATTTTTCCCTTTGATTACAGTGGTCCC  
ATTTATATCTGCTTCTAGCTTAGTGCTATGTGTGAGATATGTGTGTGTTTGGTGTTTTTGTTTTTTTTTTTTT  
TTTTTTAAGGTTTGCAAATTAAGGGCCAGAAAAATTTGGCACCAGGCAAACGAATAAAGATAGGATTGGGAA  
AGAAGTTGCTAAGTGTGCTTAGTTTTAATAAGTAATTCCTTCTCTTTTTTCAGAGAAGGCCTTACAGAAAAATGT  
TGTGCTTAGAATTGCTGGATGCATTTTACCCTCCACACAAACCTAAAAATTTTGTGACCCCTTTCACTTACCTG  
AAAAGTAGAGAAATGGATTCAAGTATAAGGATAAGGAGGGAAGGTGGACCAGAATGAAACTGTAAATATTTTTTT  
AACCTAATATCACTTAAATCGAGGCAGAAAGATATAGACATTCAATGAATTATATTCAATGCATTTAAATACCA  
CTGTAATTGACAGAGTAAAGTATAGATACAAAACCTTGTGTAAGAGGCTGACTTTTCAAATAAACATTTTTTA  
AGAAAACATTTCTTCTCCCAAATGTCTATTTTCTTGAGGAAAAATATTGCTGTGTCTTCATTTTATTACCAGGTT  
TCATTTTGGGCCTTGCTAAATTGATTGAATTAAATCCTCCAGCTTTTGAACCTTGAAAAAAGAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAGAAAAAAAAAAAAAAAAAAG

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**FIGURE 464**

MPPAVGGPVGYTTPDGGGWAVVIGAFISIGFSYAFPKSITVFFKEIEGIFHATTSEVSWISSIMLAVMYGGGPI  
SSILVNKYGSRIVMIVGGCLSGCGLIAASF CNTVQQLYVCIGVIGGLGLAFNLNPALTMIGKYFYKRRPLANGLA  
MAGSPVFLCTLAPLNQVFFGIFGWGRGSFLILGGLLLNCCVAGALMRPIGPKPTKAGKDKSKASLEKAGKSGVKKD  
LHDANTDLIGRHPKQEKRSVFQTINQFLDLTLFTHRGFLLYLSGNVIMFFGLFAPLVFLSSYGKSQHYSSEKSAF  
LLSILAFVDMVARPSMGLVANTKPIRPRIQYFFAASVVANGVCHMLAPLSTTYVGFCVYAGFFGFAFGWLSSVLF  
ETLMDLVGPQRFSSAVGLVTIVECCPVLLGPPLLGRLNDMYGDYKYTYWACGVVLIISGIYLF IGMGINYRLLAK  
EQKANEQKKEKEETSIDVAGKPNEVTKAAESPDQKDTEGGPKEEESPV

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**FIGURE 465**

GGCACGAGGGAGAACTAGTCTCGATTTTTTTTTTTTTTTTTTTCTTTGTTTTGTTTTTCCTGTATAAAAAAGGAC  
CCCAAATATAAAGGTAGGGAAAGGGACAAGAGGGGAACATACCCCTTAGTGTAGAGAAATGGGAAGGAGAAGGAGA  
AGCCTCAAAAGGAGAGGTGGGAGGGGAATGTCATTAAAGGCAGCAAAGTAATCTCTGTAGAAAGATGGAGGAGGAC  
CCTCCATAGCCTCAGAGATAAAGGCCAAAGATTGCCCTCTCAGTGTCCAGAAGGGAAATGGCAGCTTTTCTTCCTT  
CCATGGCAGCCACTCCATTGCTCACTCCGGATTACCTTCATCCTTATGTAGATAAGAGTGCTGCAGAGCTCGAAA  
GGCAGAGATTTCGCTTGTGTGGGTAAAAGTCAGCATTTCAGCAGCAGCTGTGCTCCCGACTCCTCCATCTCAGG  
TACCACCGACTGCACTGGGCGGGGCCCTCTGGGGGGAAAGGCTCCACGGGGCAGGGATACATCTCGAGGCCAGTC  
ATCCTCTGGAGGCAGCCCAATCAGGTCAAAGATTTTGCCCAACTGGTCGGCTTCAGAGTTTCCACAGAAGAGAGG  
CTTTCGACGAAACATCTCTGCAAAGATACAGCCAACACTCCACATGTCCACAGGTGTTGCATATGTGGACTGCAG  
AAGAACTTCGGGAGCTCGGTACCAGAGTGTAACAACCACGGGTGTAAGTGCCATCTGGTTAGCTGTAGATTCTGGC  
CAGGCCAAAGTCAGCCAGCTTGACTGTTCCACCCTTGTCAACAGAATGTTCTCTGGCTTCAGATCTCGGTGAAC  
GATGCAATTGGCATGAAGGAAATCTAGGCCTCTTAGAAACTGGCGCATCAGATCCTTGATCGTTTCGGCTGGCAA  
GCCTGGTGGGGGTGCCTTGTCCAGATATGTCCTTAGGTCTGGTCTACATGCTCAAACACCAGGGTTACCTTGAT  
CTCCCGGTCACTTCGGGATGTGGCACAGACGTCCATCAGCCGGACAACATTGGGATGCTCAAAAAGCCTCCAGTCG  
CCTCAGTAAAGCCACCTCACGAACTGTGCTGATGGGAAGGCCCTCCTCCACCTCCTCCTCATTGGGGACTCTCAC  
ACTCTTGAGGGCCACAAAGTGGCCACTGTGGGGATCACGGGCCTGTACACTGTCCCATAGGCACCGACACCAAT  
TTCAGCCACTGGCTCATATCGAGAGGTAGCCATTCTCAGATCAAGGGAGACCCTCACGCCAGCCCGGGGTGCTGT  
GGGGGCGGCCCGTTATCGGGGCCCGGAGCCGGTTCCTACGGCCCATACACCCGAGCTCGGTCCGGAGCAG



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**FIGURE 466**

MSTGVAYVDCRRTSGARYQSVTTTGVSATW

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**FIGURE 467**

GAATTCGAGGATCCGGGTACCATGGGAGGAAAACTTCTTCCTGGCCTGGGCTCCGTGCCGCTCTGTTTGCCAACC  
GTCCAGTCCCGCCTACCAAGTGCCGGGCGCTCCCCACCCCTCCCCCGGCTCCCCCGGTGTCCGCCATGGCCAAAGC  
CTACGACCACCTCTTCAAGTTGCTGCTGATCGGGGACTCGGGGGTGGGCAAGACTTGTCTGATCATTGCTTTGC  
AGAGGACAACCTTCAACAACACTTACATCTCCACCATCGGAATTGATTTCAAGATCCGCACTGTGGATATAGAGGG  
GAAGAAGATCAAACCTACAAGTCTGGGACACGGCTGGCCAAGAGCGGTTCAAGACAATAACTACTGCCTACTACCG  
TGGAGCCATGGGCATTATCCTAGTATACGACATCACGGATGAGAAATCTTTCGAGAATATTCAGAACTGGATGAA  
AAGCATCAAGGAGAATGCCTCGGCTGGGGTGGAGCGCCTCTTGCTGGGGAACAAATGTGACATGGAGGCCAAGAG  
GAAGGTGCAGAAGGAGCAGGCCGATAAGTTGGCTCGAGAGCATGGAATCCGATTTTTCGAACTAGTGCTAAATC  
CAGTATGAATGTGGATGAGGCTTTTAGTTCCCTGGCCCGGGACATCTTGCTCAAGTCAGGAGGCCGGAGATCAGG  
AAACGGCAACAAGCCTCCCAGTACTGACCTGAAAACCTTG TGACAAGAAGAACACCAACAAGTGCTCCCTGGGCTG  
AGGACCCTTTCTTGCTTCCCCACCCCGGAAGCTGAACCTGAGGGAGACAACGGCAGAGGGAGTGAGCAGGGGAGA  
AATAGCAGAGGGGCTTGGAGGGTCACATAGGTAGATGGTAAAGAGAATGAGGAGAAAAAGGAGAAAAGGGAAAAG  
CAGAAAGGAAAAAAGGAAGAGAGAGGAAGGGAGAAGGGAGAGGAATGAATTGAGGAAGTGAAAGAAGGCAAGGA  
GGTAGGAAGAGAGGGAGGAGGAAAGGAAGGAGAGAGATGCCTCAGGCTTCAGACCTTACCTGGGTTTTCAGGGCA  
AACATAAATGTAAATACACTGATTTATTCTGTTACTAGATCAGGTTTTAGGGTCCTGCAAAAGGCTAGCTCGGCA  
CTACACTAGGGAATTTGCTCCTGTTCTGTCACCTTGTCATGGTCTTTCTTGGTATTAAAGGCCACCATTGTCACAA  
AAAAAAAAAAAAAACCATGGTACCCGGATCCTCGAATTC

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**FIGURE 468**

MAKAYDHLFKLLLLIGDSGVGKTCLIIRFAEDNFNNTYISTIGIDFKIRTVDIEGKKIKLQVWDTAGQERFKTITT  
AYYRGAMGIILVYDITDEKSFENIQNWMKSIKENASAGVERLLLGNKCDMEAKRKVQKEQADKLAREHGIRFFET  
SAKSSMNVDEAFSSLARDILLKSGGRRSGNGNKPPSTD LKTCDDKNTNKCSLG

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**FIGURE 469A**

GGTGTGGACGTTGTCTAAATTTTCGGTAGCCATGGCACAAGAATATAAGAAAGCATGGGATTATGGCAACCACAGA  
ATCTCAGTAGTACAAGTTCCATTTCAGTTTTTTCTGAAAGAAAGCCCTCTGTAAAGTGAAGCAAAGAAACTGTTG  
TGGATTATAACGTTTGTAGAGTTCCAATTTTTTCAGTGCTTTACAAATAAAGCATCATTTTAACCTTTTAAATGAAAA  
AGATTAAGATCTCATGCAACTGTTGTATTTTTCTGGAAGCCATTCTCCAAAAGGGAAGTGCACATTTAAACACAG  
ATATGATGGTCCCTTGCTGCAGGGATTTAAGTCTACTTGCTTTTACATCATGACCAGCTTGAAACGGTCACAGACA  
GAAAGGCCCTCTTGCCACTGACAGGGCCTCTGTTGTTGGCACAGACGGCACCCCCAAAGTCCACACTGATGATTTT  
TACATGCGGCGCTTCCGGTCCCAAATGGCAGCTTAGGATCATCAGTTATGGCTCCTGTAGGACCCCCCGAAGT  
GAAGGTTCTCACCATAATAACCTCAACCCCCGGAGTCCCAAAAATGGGGGTAAGGGCAAGGATTGCAGATTGGCCC  
CCAAGAAAGGAAAACATAAAAGAATCTAGCCGTTCAAGCCAGGAAATAGAAACCTCAAGTTGCCTTGATAGCCTG  
TCCTCCAAAAGCAGTCTGTGAGTCAGGGAAGTTCTGTTAGCCTCAATTCCAATGACTCAGCCATGCTGAAAAGC  
ATACAGAACACGCTGAAAAACAAGACAAGACCGTCGGAGAACATGGACTCCAGATTTCTCATGCCTGAAGCCTAC  
CCCAGCTCCCCCAGAAAAGCTCTTCGCAGAATACGCCAGCGAAGCAACAGTGATATCACCATAAGTGAACCTGAT  
GTGGATAGCTTTGATGAATGTATCTCACCTACATACAAGACTGGACCATCACTGCACAGGGAATATGGTAGCACA  
TCTTCAATTGATAAACAGGGAACATCTGGAGAAAAGCTTTTTTGATTTGTTAAAGGGCTACAAAGATGACAAATCT  
GATCGAGGTCCAACCTCAACCAAGCTCAGTGACTTTCTCATTACTGGTGGTGGCAAGGGTTCTGGTTTTCTTTTG  
GATGTAATAGACGGGCCTATCTCACAGAGAGAGAACCTCAGGCTTTTTAAGGAAAGGGAAAAACCCTCAAGCGA  
CGTTCAAAATCTGAAACTGGAGACTCCTCTATTTTTTCGTAAATTGCGCAATGCCAAAGGTGAAGAACTTGGGAAG  
TCATCAGATCTTGAAGATAACCGATCAGAAGACTCTGTGAGGCCCTGGACATGTCCAAAGTGCTTTGCCCACTAT  
GATGTCCAGAGTATATTATTTGATTTGAATGAGGCAATTATGAACAGGCACAATGTTATTAAGAGGAGAAAACACC  
ACCACTGGAGCTTCCGCAGCTGCCGTGGCATCCTTGCTCTGGACCTCTGTCTCATTTCAGCCAGTTTTAGCTCC  
CCAATGGGCAGCACAGAGGACCTGAATTCCAAAGGAAGCCTCAGCATGGACCAGGGAGATGATAAAAGCAATGAG  
CTTGTAATGAGCTGTCCATATTTTCGGAATGAGATAGGTGGAGAAGGGGAGAGGAAAATCAGCCTTTCAAAATCA  
AATTCTGGCTCCTTTAGTGGATGTGAAAGTGCCCTCCTTTGAGTCTACCCTTAGTTCCCATTCACAAATGCAGGA  
GTGGCAGTACTTGAAGTGCCCAAGGAGAAGCTTGGTGTGACCTAGATAGAGTGAAAAGATACATCGTGGAACAC  
GTAGATCTGGGTGCATACTATTATAGAAAATTTTTCTACCAGAAGGAACACTGGAAGTATTTTGGGGCTGATGAG  
AATCTTGGTCCAGTGGCTGTGAGCATTGGAAGGGAAAAACCAGATGAAATGAAAGAAAATGGATCTCCGTACAAC  
TACCGAATAATTTTTAGAACTAGTGAGCTCATGACACTGAGAGGTTCCGGTCTGGAGGACGCCATTCCGTGACAC  
GCCAAGCACTCGACAGCCAGAGGCCTGCCTCTCAAAGAAGTGCTGGAGCACGTGGTTTCTGAGCTCAATGTCCAG  
TGCCTGCGGTTGGCCTTCAACACACCCAAGGTCACAGAGCAGCTCATGAACTGGATGAACAAGGGCTGAACTAC  
CAGCAGAAAAGTAGGCATCATGTACTGCAAAGCTGGACAGAGCACTGAAGAAGAGATGTACAACAATGAGTCAGCT  
GGCCAGCCTTTGAAGAATTCCTTCAACTATTGGGAGAGCGAGTTCCGGCTCAAAGGATTTGAGAAGTATCGAGCA  
CAGCTTGATACCAAACTGACTCCACTGGAACCCATTCTCTGTACACAACATACAAAGATTATGAAATTATGTTT  
CATGTTTCTACCATGCTGCCATACACACCCAACAACAACAGCTCCTGAGGAAGCGGCACATTGGAAATGAT  
ATCGTAACAATTGTTTTCCAAGAGCCTGGAGCACAGCCATTGAGCCAAAAAACATCCGATCCCACTTCCAGCAC  
GTTTTCGTCAATCGTCAGGGTGCACAATCCGTGCTCTGACAGTGTCTGTTATAGTGTGGCTGTTACCAGGTCCAGA  
GATGTGCCTTCTTTGGGCCTCCCATTCCTAAAGGGGTCCTTTCCCTAAGTCAAATGTGTTTCAGGGACTTCCCTT  
TTGGCGAAAAGTGATTAATGCAGAAAATGCTGCTCATAAATCGGAGAAGTTTCGGGCCATGGCAACTCGGACCCGC  
CAGGAATACCTGAAAGATCTGGCAGAAAAGAATGTCACCAACACCCCTATCGACCCTTCTGGCAAGTTTCCGTTT  
ATCTCTCTGGCTTCCAAGAAGAAGGAAAAGTCTAAGCCATATCCAGGAGCCGAGCTCAGCAGCATGGGGGCCATT  
GTATGGGCAGTCCGGGCTGAAGACTACAACAAGGCCATGGAAGTACTGACCTTTTAGGGATCTCCAATGAGTTC  
ATTGTGCTCATTGAACAGGAAACAAAGAGCGTGGTCTTCAATTGTTTCTGTAGAGATGTGATAGGGTGGACTTCA  
ACTGACACCAGCCTCAAAATCTTCTATGAACGAGGAGAATGTGTTTCAGTGGGTAGTTTTATTAAACATTGAGGAG  
ATCAAAGAGATTGTCAAAGGTTGCAGTTTGTTCAAAAGGCTGTGAATCGGTGGAGATGACTCTGCGAAGAAAT  
GGGCTAGGACAGCTTGGCTTCCATGTCAACTATGAGGGCATTGTGGCGGATGTGGAGCCCTACGTTTATGCCTGG  
CAGGCAGGGCTGAGGCAGGGCAGTCGCCTGGTGGAGATCTGCAAGGTGGCGGTAGCCACTCTGAGCCATGAGCAG  
ATGATCGACCTCCTGAGAACATCTGTACGGTGAAGGTTGTATCATTTCCCCCGCATGATGACTGCACCCCGCGG  
AGGAGTTGCTCTGAAACCTACCGCATGCCAGTGATGGAGTACAAAATGAATGAAGGTGTTTCATACGAATTCAAG  
TTTCCCTTCCGAAATAATAACAAGTGGCAGAGGAACGCCAGCAAGGGGCCTCATTACCTCAAGTCCCGTCCAG

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**FIGURE 469B**

GTGCAGAGTCCCATGACCTCGCGGCTGAATGCTGGAAAAGGAGATGGGAAGATGCCTCCTCCAGAAAAGAGCCGCC  
AACATCCCCTCGAAGCATCTCCAGTGACGGGCGCCCACTAGAGAGGGCGGCTGTCTCCTGGTTTCGGACATCTATGTG  
ACGGTCTCATCCATGGCTTTAGCAAGATCCCAGTGTCGGAACCTCTCCTAGCAACTTGTCTTCATCCAGTGATACT  
GGTTCTGTGGGGGGCACTTACAGGCAGAAGTCCATGCCCCGAAGGGTTTGGAGTGAGCCGTAGATCCCCAGCCTCC  
ATTGACAGGCAGAACACCCAGTCAGATATTGGTGGCAGCGGAAAATCCACGCCTAGCTGGCAAAGAAGTGAGGAT  
AGCATTGCTGACCAGATGGCTTACAGTTATAGAGGACCTCAGGATTTCAATTCTTTTGTCTCGAGCAGCATGAA  
TATACAGAGCCAACATGCCATCTCCAGCAGTATCAAAGGTACTGCCAGCTTTCCGAGAGAGCCCCAGTGGGAGA  
TTAATGCGGCAGGATCCAGTGGTTCATTTGTCTCCAAACAAACAAGGGCATTCTGATAGCCACTACTCGAGCCAC  
TCCAGTAGCAATACTCTCTCCAGCAATGCGTCAAGTGCCCATAGTGATGAGAAGTGGTACGATGGGGACCGCACA  
GAATCCGAACCTCAACAGCTATAACTATCTGCAAGGCACCTCTGCTGACAGTGGCATTGACACCACCTCTTATGGC  
CCCAGCCACGGCAGCACAGCCTCGCTGGGGGCTGCCACATCGTCACCTCGCTCAGGGCCAGGCAAGGAGAAAAGTG  
GCACCCCTATGGCACAGCTCCAGTGAAGTAATCTCCATGGCAGATCGGACTTTGGAGACAGAGAGCCACGGCCTG  
GACCGGAAAACAGAGTCTTCCCTGAGCTTAGACATACACAGCAAGAGCCAAGCCGGCTCGACCCCTCTGACAAGG  
GAGAACAGCACCTTCAGTATAAACGATGCTGCTTCCCACACAAGTACCATGAGCTCCCAGACTCTGCCAGCCCA  
GTGGTTTTTACCAGTGCCCGGAGTTCACCTAAAGAAGAGCTTCATCCAGCTGCCCCCTCACAGCTCGCACCATCC  
TTCTCCTCCTCTTCTCCTCCTCCTCTGGTCTAGGAGTTTTTACCCTCGCCAGGGCGCTACTAGCAAAGTACCTG  
ATTGGATGGAAAAAACCCGAAGGAACCATAAACTCCGTGGGATTTATGGACACGAGAAAGCGTCATCAGAGCGAT  
GGCAATGAAATAGCCACACCAGGCTGCGTGCTCAACCAGAGACCTCCGGGCATCTCCTAAGCCAACCTCCAAG  
TCCACCATGGAAGAAGATCTAAAGAACTAATTGATCTTGAAAGCCCAACTCCTGAATCACAGAAGAGTTTTAAG  
TTCCACGCACTCTCCTCTCCTCAGTCTCCTTTCCCCAGCACCCCCACCTCACGGCGGGCCTTGACAGAACACTG  
TCGGACGAGAGCATTTACAATAGCCAGAGGGAGCACTTTTTTACCTCCAGGGCGTCACTTCTGGACCAAGCCCTG  
CCCAACGACGTCCTCTTCAGTAGCACGTACCCTTCTCTCCCCAAGTCGCTCCCGTTGAGGAGGCCTTCTTACACC  
TTAGGAATGAAATCGCTGCATGGAGAGTTCTCAGCCTCGGACAGCTCCCTCACTGACATCCAGGAGACCCGCAGG  
CAGCCTATGCCCCGACCTGGCCTGATGCCCTGCTGACACTGCTGCAGACTTGGATTGGTCCAACCTGGTAGAT  
GCTGCCAAAGCCTATGAGGTCCAGAGAGCCTCATTTTTTGTCTGCTAGTGATGAAAACCATCGCCCCCTTGAGTGCT  
GCATCCAACAGTGATCAGCTGGAGGACCAGGCTCTGGCCAGATGAAGCCTTACAGCAGCAGTAAAGACTCCTCT  
CCCCTCTGGCTTCTAAAGTGGACCAGCTGGAAGGTATGCTGAAGATGCTTCGGGAAGATTTGAAGAAGGAAAAA  
GAAGACAAAGCTCACCTTCAGGCGGAGGTGCAGCACCTGCGAGAGGACAACCTGAGGCTACAGGAGGAGTCCAG  
AACGCCTCGGACAAGCTGAAGAAGTTCACAGAATGGGTCTTCAACACCATAGACATGAGCTAGGGAAGGCTGAGG  
AGGACAGGAGAAGGGCCAGACACTCCCTCCAGTGAGTGTCTGCAGCCCTTATTCCCTCCATAGAAAGCATCCT  
CAGAGCACCTTCCCTGGCTTCCCTACTCTGCCCCCTTTCGGGGAGTGCACAACACAATAGTTGCAGATCAACAATC  
ATCACCTGCCTTTTGTAGAAAAGAAAAACAAAAAAGTAAATAAAAATTTTAAACAGTAAAATAAAAGTTTAACT  
GCTAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 470**

MTSLKRSQTERPLATDRASVVGTDGTPKVHTDDFYMRFRSQNGSLGSSVMAPVGPPRSEGSHHITSTPGVPKMG  
VRARIADWPPRKENIKESSRSSQEIETSSCLDSLSSKSSPVSQGSVSLNSNDSAMLKSIQNTLKNKTRPSENMD  
SRFLMPEAYPSSPRKALRRIRQRSNSDITISELDVDSFDECISPTYKTGPSLHREYGSTSSIDKQGTSGESFFDL  
LKGKDDKSDRGPTPTKLSDFLITGGGKSGFSLDVIDGPISQRENRLFKEREKPLKRRSKSETGDSSIFRKLRL  
NAKGEELGKSSDLEDNRSEDSVRPWTCPKCFAHYDVQSIILFDLNEAIMNRHNVIKRRNTTTGASAAVASLVSGP  
LSHSASFSSPMGSTEDLNSKGSLSMDQGDCKSNELVMSCPYFRNEIGGEGERKISLSKSNSGSFGCESASFEST  
LSSHCTNAGVAVLEVPKENLVHLDRVKRYIVEHVDLGAYYRKFFYQKEHWNFGADENLGPVAVSIRREKPD  
MKENGSPYNYRIIFRTSELMTLRGSLVEDAIPSTAKHSTARGPLKEVLEHVPELVQCLRLAFNTPKVTEQLM  
KLDEQGLNYQQKVGIMYCKAGQSTEEEMYNNESAGPAFEFLQLLGERVRLKGFKEYRAQLDTKDSTGTHSLYT  
TYKDYEIMFHVSTMLPYTPNNKQQLLRKRHIGNDIVTIVFQEPGAQPFSPKNIRSHFQHVFIIVRVHNPCSDSVC  
YSVAVTRSRDVPSPFGPPIPKGVTFPKSNVFRDFLLAKVINAENAAHKSEKFRAMATRTRQEYLDLAEKNVTNTP  
IDPSGKFPFISLASKKKEKSKPYPGAELSSMGAIVWAVRAEDYNKAMELDCLLGISNEFIVLIEQETKSVVFNC  
CRDVGWTSSTDITSLKIFYERGEVSVGSFINIEEIKEIVKRLQFVSKGCESVEMTLRRNGLGQLGFHVNYEGIVA  
DVEPYGYAWQAGLRQGSRLVEICKVAVATLSHEQMIDLLRTSVTVKVVIIPPHDDCTPRRSCSETYRMPVMEYKM  
NEGVSYEFKFPFRNNNKWQRNASKGPHSPQVPSQVQSPMTSRLNAGKGDGKMPPPERAANIPRSISSDGRPLERR  
LSPGSDIYVTVSSMALARSQCRNSPSNLSSSSDTGSGVGGTYRQKSMPEGFGVSRSPASIDRQNTQSDIGGSGKS  
TPSWQRSEDSIADQMAYSIRGPQDFNSFVLEQHEYTEPTCHLPAVSKVLPAPFRESPSGRLMRQDPVVHLSPNKQG  
HSDSHYSSSHSSNTLSSNASSAHSDEKWDGDRTESELNSYNLQGTSAADSGIDTTSGPSHGSTASLGAATSSP  
RSGPGKEKVAPLWHSSEVISMADRTLETESHGLDRKTESSLSDIHSKSQAGSTPLTRENSTFSINDAASHTST  
MSSRHSASPVVFTSARSSPKEELHPAAPSQALAPSFSSSSSSSSSGPRSFYPRQGATSKYLIGWKKPEGTINSVGFM  
DTRKRHQSDGNEIAHTRLRASTRDLRASPPTSSTIEEDLKKLIDLESPTPESQKSFKFHALSSPQSPFPSTPT  
SRRALHRTLSDESIYNSQREHFFTSRASLLDQALPNDVLFSSSTYPSLPKSLPLRRPSYTLGMKSLHGEFSASDSS  
LTDIQETRQPMFDPGLMPLPDTAADLDWSNLVDAAKAYEVQRASFFAASDENHRPLSAASNSDQLEDQALAQMK  
PYSSSKDSSPTLASKVDQLEGMLKMLREDLKKEKEDKAHLQAEVQHLREDNLRLQEESSQNASDKLKKFTWVFN  
IDMS

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**FIGURE 471**

CGGAGGTGAGGTTTGTACCGCGATTCTGAGAGGTGGGCTTTTAGTCCCTCCAGACCTCGGCTTTAGTGCTGTCT  
CCGCTTTTCTTTCACCTTCACAGAGGTTTCGTGTCTTCTTAAAAGAAGGTTTTATTGGGAGGTAAAGGTCAATGCCG  
TAGGGGTAGAGTAAGATGCTTTATGGTGAAATTGAAGGTAAATTCCTGGGACCTAGAGAAGAAGTAACGAGTGAG  
CCACGCTGTAAAAAATTGAAGTCAACCACAGAGTCGTATGTTTTTACCAATCATAGTAATGCTGATTTTCACAGA  
ATCCAAGAGAAAACTGGAAATGATTGGGTCCCTGTGACCATCATTGATGTCAGAGGACATAGTTATTTGCAGGAG  
AACAAAATCAAACTACAGATTTGCATAGACCTTTGCATGATGAGATGCCTGGTAATAGACCAGATGTTATTGAA  
TCCATTGATTCACAGGTTTTACAGGAAGCACGTCTCCATTAGTATCCGCAGACGATGAGATATATAGCACAAAGT  
AAAGCATTATAGGACCCATTTACAAACCCCTGAGAAAAAGAAACGTAATGAAGGGAGGAATGAGGCACATGTT  
CTAAATGGTATAAATGACAGAGGAGGACAAAAAGAGAAACAGAAATTTAACTCTGAAAAATCAGAGATTGACAAT  
GAATTATTCCAGTTTTACAAAGAAATTGAAGAGCTTGAAAAGGAAAAAGATGGTTTTGAGAACAGTTGTAAAGAA  
TCTGAACCTTCTCAGGAACAATTTGTTCCATTTTATGAGGGTCATAATAATGGTCTCTTAAAACCTGATGAAGAA  
AAGAAAAGATCTTAGTAATAAAGCTATGCCATCACATTGTGATTATCAGCAGAACTTGGGGAATGAGCCAGACAAA  
TATCCCTGTAATGGACAAGTAATACCTACATTTTGTGACACTTCATTTACTTCTTTTCAGGCCTGAATGGCAGTCA  
GTATATCCTTTTATAGTGCCCTATGGTCCCCCTCTTCCCAGTTTGAAGTATCATTAAACATTTCAGAGATTTCAGT  
GGTCCACCAAATCCACCATCAAAATATTTTCCAAGCCCCAAGATGACTCTCAGATACAAAATGGATATTATGTAAAT  
AATTGTCATGTTAACTGGAATTGCATGACTTTTGTATCAGAACAATGAATATACTGACTGTAGTGAGAAATAGGAGT  
AGTGTTTCATCCCTCTGGAAATGGCTGCAGTATGCAAGATCGATATGTGAGTAATGGTTTTCTGTGAAGTCAGAGAA  
AGATGCTGGAAAGATCATTGTATGGACAAGCATAATGGAACAGACAGGTTTGTGAACCAGCAGTTTCAAGAGGAA  
AAGTTAAATAAATTGCAGAAGTTACTTATTCTTTTAAAGAGGTCTGCCTGGTTCTGGGAAAAACAACATTGTCTCGA  
ATTCTGCTTGGTCAGAATCGTGATGGCATTGTGTTTCAGCACTGATGACTATTTTACCATCAAGATGGGTACAGG  
TATAATGTTAATCAACTTGGTGATGCCCATGACTGGAACCAGAACAGAGCAAAACAAGCTATCGATCAGGGAAGA  
TCTCCAGTTATAATAGATAACACTAATATACAAGCTTGGGAAATGAAGCCATATGTGGAAGTGGCCATAGGAAAA  
GGATACAGAGTAGAGTTTCATGAACCTGAACTTGGTGGAATTTGATCCTGAAGAATTAGAAAAGAGGAATAAA  
CATGGTGTGTCTCGAAAGAAGATTGCTCAGATGTTGGATCGTTATGAATATCAAATGTCCATTTCTATTGTAATG  
AATTCAGTGAACCATCACACAAAAGCACACAAAGACCTCCTCCACAGGGGAGACAGAGGTGGGGAGGCTCT  
CTTGGCTCACATAATCGTGTCTGTGTACAAATAATCATTAATAGCTATTTTCAGCTAACACATTTGTTGTTG  
CACTTGAAAAAGAGTTAGTGAGCCTGTCTTGGAGTTTAAAGTAGTTTCAAATAAAAAAAGGCTACAGTGCCTCACA  
AAGGATGTTCCAGCAAGTTGTTTAAATTCCAGCAAGTTGTTAAAGTGTAATAAAAAATATATGAAATTGTATT  
TTAAATGTTTTTATATTCTCTTGTGTGTAATACTCTTGGCTGTTATGGAAGCACCTGAGTAATAGAGTGGTGGGTA  
GGAGCTAGGATGTTTTTCTACAATCGAATTTTAACTAATTTATCTATTTTATAGACACTATTGAACAGTTTTTT  
AATAGTTCATATCTAAATCTAACTTTTCTATAAACTTTACGGTTTTTCTTCACTACCTTAAATATGCAAGAAAT  
ACTGACTTGGTATAGGGTACCTTAGTTTTCTCTATTCTATTAGACAGGTAAAATTATATTTTCAGCTGATTGATCTG  
TGTGACAAAATTATTTCTTAGCTATAATCAGCACATCACTTAGTTCAAACAAAATCCCCAGCAAAATGTTAGATA  
GTAGGTATATCAGTCACCTGGGGAGTTTTCTTCATAATATGCATATTCATCTTGTAAATGCATACATAGTTATCAT  
CCTCCTTCTCAACCATCTCCCTAACCCACATGCTTGCCAGTTCTTGAAGGGATAAAGTGATTCTAATAATGTT  
TTACTTCTCTCTGTTCAATTTAATGTGATATAATTCTAGTATAAAAAATATTTTGGACAGTTGCTTAACATGGTCA  
TAAGAGGATTTGTACTATAGAATATCTTCTAGTACTAATTTTTCTGTAGAGCAAATTATATTTCTCTCACTGGAT  
AGTTTTTAGATGTGTTTTCTTCATATAAAATTAAAAACTGAGATGGAATTC

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**FIGURE 472**

MSYGEIEGKFLGPREEVTSEPRCKKLKSTTESYVFHNHSNADFHRIQEKTGNDWVPVTIIDVRGHSYLQENKIKT  
TDLHRPLHDEMPGNRPDVIESIDSQVLQEARPPIVSADDEIYSTSKAFIGPIYKPPEKKKRNEGRNEAHVLNGIN  
DRGGQKEKQKFNSEKSEIDNELFQFYKEIEELEKEKDGFESENCKESEPSQEQFVPFYEYEGHNNGLLKPDEEKKDLS  
NKAMP SHCDYQQNLGNEPDKYPCNGQVIPTFCDTSTSTFRPEWQSVYPFIVPYGPPLPSLNYHLNIQRFSGPPNP  
PSNIFQAQDDSQIQNGYYVNNCHVNWNCMTFDQNNNEYTDCSENRSSVHPSGNGCSMQDRYVSNGFCEVRERCWKD  
HCMDKHNGTDRFVNQQFQEEKLNKLQKLILLRGLPGSGKTTLSRILLGQNRDGIVFSTDDYFHHQDGYRYNVNQ  
LGDAHDWNQNRKQAIQGRSPVIIDNTNIQAWEMKPYVEVAIGKGYRVEFHEPETWWKFDPEELEKRNKHGVSR  
KKIAQMLDRYEYQMSISIVMNSVEPSHKSTQRPPPPQGRQRWGGSLGSHNRVCVTNNH



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**FIGURE 473**

GGCGGCGGCAGCGGGTTCGGTTGCGCGTGGCGCACGGGGTGGGAGCGGAGCCCAGGCCGGGAGCAGGCGCCGCCG  
CCAGCGACCA**AT**GGGGAACGTGTTGGCTGCCAGCTCGCCGCCCGCAGGGCCGCCACCGCCGCCTGCGCCGGCCCTC  
GTGGGGGTGCCGCCACCTCCGCCCTCGCCGCCGGGCTTCACGCTGCCGCCGCTGGGAGGCAGCCTGGGCGCCGGC  
ACAGTACGAGTCAAGTTCGGAACGGACCCCCGGGGCTGCAACCGCCAGCGCCTCAGGGGCCGCCGAGGATGGG  
GCCTGCGGCTGCCTGCCCAACCCGGGCACATTCGAGGAGTGCCACCGGAAGTGCAAGGAGCTGTTTCCCATTAG  
ATGGAGGGTGTCAAGCTCACAGTCAACAAAGGGTTGAGTAACATTTTCAGGTCAACCACACAGTAGCCCTCAGC  
ACAATCGGGGAGTCCAACCTACCACTTCGGGGTCACATATGTGGGGACAAAGCAGCTGAGTCCCACAGAGGCGTTC  
CCTGTACTGGTGGGTGACATGGACAACAGTGGCAGTCTCAACGCTCAGGTCATTACACAGCTGGGCCCCGGTCTC  
AGGTCCAAGATGGCCATCCAGACCCAGCAGTCGAAGTTTGTGAACTGGCAGGTGGACGGGGAGTATCGGGGCTCT  
GACTTCACAGCAGCCGTCACCTTGGGGAACCCAGACGTCCTCGTGGGTTTCAGGAATCCTCGTAGCCCACTACCTC  
CAGAGCATCACGCCTTGCTGGCCCTGGGTGGAGAGCTGGTCTACCACCGCGGCCCTGGAGAGGAGGGCACTGTC  
ATGTCTCTAGCTGGGAAATACACATTGAACAACCTGGTTGGCAACGGTAACGTTGGGCCAGGCGGGCATGCACGCA  
ACATACTACCACAAAGCCAGTGACCAGCTGCAGGTGGGTGTGGAGTTTGAGGCCAGCACAAAGGATGCAGGACACC  
AGCGTCTCCTTCGGGTACCAGCTGGACCTGCCCCAAGGCCAACCTCCTCTTCAAAGGCTCTGTGGATAGCAACTGG  
ATCGTGGGTGCCACGCTGGAGAAGAAGCTCCCACCCCTGCCCTGACACTGGCCCTTGGGGCCTTCTGAATCAC  
CGCAAGAACAAGTTTTCAGTGTGGCTTTGGCCTCACCATCGGCT**AG**AGCCCTCCTGGCCCCCGCCTTCCACGCCCTT  
CCGATTCCACCTCCACCTCCACCTCCCCCTGCCACAGAGGGGAGACCTGAGCCCCCTCCCTTCCCTCCCCCTT  
GGGGGTTCGGGGGGGACATTGAAAAGGAGGGACCCCGCCACCCAGCAGCTGAGGAGGGGATTCTGGAAGTGAAT  
GGCGCTTCGGGATTCTGAGTAGCAGGGGCAGCATGCCAGTGGGCCTGGGGTCCCGGGAGGGATTCCGGAATTGA  
GGGGCACGCAGGATTCTGAGCACCAGGGGCAGAGGCGGCCAGACAACCTCAGGGAGGAGTGCTCCTGGCGTCCCCA  
TCCTCCAAAGGGCCTGGGCCCCGCCCCGAGGGGGCAGCGAGAGGAGCTTCCCCATCCCCGGTCAGTCCACCCTGCC  
CCGTCCACTTTCCCATCTCCTCGGTATAAAATCATGTTTATAAGTTATGGAAGAACC GGACATTTTACAGAAAAA  
AAACAAAAACAACAAAAAATATACGTGGGAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 474**

MGNVLAASSPPAGPPPPAPALVGLPPPPSPPGFTLPPLGGSLGAGTSTSRSSERTPGAATASASGAAEDGACG  
CLPNPGTFEECHRKCKELFPIQMEGVKLTVNKGLSNHFQVNHTVALSTIGESNYHFGVTYVGTKQLSPTEAFPVL  
VGDMDNSGSLNAQVIHQLGPLRSKMAIQTQQSKFVNWQVDGEYRGSDFTAAVTLGNPDVILVSGIILVAHYLQSI  
TPCLALGGELVYHRRPGEEGTVMISLAGKYTLNNWLATVTLGQAGMHATYYHKASDQLQVGVEFEASTRMQDTSVS  
FGYQLDLPKANLLFKGSVDSNWIVGATLEKKLPPLPLTLALGAFLNHRKNKFQCGFGLTIG

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**FIGURE 475**

GCAGAGGCGCAGGTAG**ATG**GAGTTGGGGAGTTGCCTGGAGGGCGGGAGGGAGGCGGGCGGAGGAAGAGGGCGAGCC  
TGAGGTGAAAAAGCGGCGACTTCTGTGTGTGAGGTTTGCTCGGTTCGCAAGCTGCGATGCCGCGAGTGGCTCAGTG  
CTTCCTGGCCGAGAACGACTGGGAGATGGAAAGGGCTCTGAACTCCTACTTCGAGCCTCCGGTGGAGGAGAGCGC  
CTTGGAACGCCGACCTGAAACCATCTCTGAGCCCAAGACCTATGTTGACCTAACCAATGAAGAAACAACCTGATTC  
CACCCTTCTAAAAATCAGCCCATCTGAAGATACTCAGCAAGAAAATGGCAGCATGTTCTCTCTCATTACCTGGAA  
TATTGATGGATTAGATCTAAACAATCTGTCTCAGAGAGGGGCTCGAGGGGTGTGTTTCTACTTAGCTTTGTACAGCCC  
AGATGTGATATTTCTACAGGAAGTTATTCCCCCATATTATAGCTACCTAAAGAAGAGATCAAGTAATTATGAGAT  
TATTACAGGTCATGAAGAAGGATATTTACAGCTATAATGTTGAAGAAATCAAGAGTGAAATTAAGGCAAGA  
GATTATTCCTTTTCCAAGTACCAAAATGATGAGAAACCTTTTATGTGTGCATGTGAACGTGTCAGGAAATGAGCT  
TTGCCTTATGACATCCCATTGGAGAGCACCAGAGGGCATGCTGCGGAACGAATGAATCAGTTAAAAATGGTTTT  
AAAGAAAATGCAAGAGGCTCCAGAGTCAGCTACAGTTATATTTGCAGGAGATACAAATCTAAGGGATCGAGAGGT  
TACCAGATGTGGTGGTTTACCCAACAACATTGTGGATGTCTGGGAGTTTTTGGGCAAACCTAAACATTGCCAGTA  
TACATGGGATACACAAATGAACTCTAATCTTGAATAACTGCTGCTTGTAACCTTCGTTTTGATCGAATATTTTT  
CAGAGCAGCAGCAGAAGAGGGACACATTATTCGCCGAAGTTTGGACCTTCTTGGATTAGAAAACTGGACTGTGG  
TAGATTTCTAGTGATCACTGGGGTCTTCTGTGCAACTTAGATATAATATTG**TAAA**ATGCTTTTCAAGTGTGGGT  
TTTGCCCTGATTGTTGCAAATACAATTTCCACCTTCTGGAAAGGTAGGTTTGCTGTGGAGGAAATAATGTACTAG  
ATCATTGTCACAGAAAAACCAACTATGATTTATGGTTGTGTTTTTCAGAATTCAACATTAAAGATTAATGTTTATT  
TAAACGAACACATTCTGCATTTCAGGATGTGAGGCCATTTAATAAAAAGGGCACAAAGCCTGTCAGAGTTTTCAA  
CGGTGCTTATAGCTGCCAGCTGGATTCCAAACAGGTACCCCATTTGCTCTGAGCTAATGTTTATATTTTTCCATT  
CAGGCACCGAAATAGTTAATATTTAAAAATAAGTCTTCAAAAAGAAAACATAAGAGATTATTGAGTTCTTGGGACTG  
GATCCTTTATTTTATAAGTTTCAGATCATCTTAAATGAAAATGCCATGATTATCTGCAGTTAAGTAGATGACAGCT  
ATTCTACATCAGACTTGATTTTTGTCTAGCTAATTACATAATTGGTAAGCTATAATTGAAACCTTATGGCTTAAAA  
TTCCTTAACTCCTTTTTGATTTCATGTTTGTAGTCATGTTGTCAACAGAGGCAAAGTTAAGCTTGATGATGGTTAA  
AATCGGTTTGATAGCACCATGGGACATTTTTCTAACAAAAATAAATGCATGAAGAGACATAGCCTTTTAGTTTTG  
CTAATTGTGAAATGGAAATGCTTTACAGGAAGTAAATGCAAATTACTTTTAAGTGTGCTTTAAAGAAAAATATTT  
TCCCCACAAGAGAAATTTAAATAAAGAATTTTATTTGTTTAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 476**

MELGSCLEGGREAAEEEGEPEVKKRRLLCVRFASVASCDAAVAQCFLAENDWEMERALNSYFEPPEESALERRP  
ETISEPKTYVDLTNEETTDSTTSKISPSED TQQENGSMFSLITWNIDGLDLNNLSERARGVCSYLALYSPDVIFL  
QEVIPPYYSYLKKRSSNYEIIITGHEEGYFTAIMLKKS RVKLKSQEIIIPFPSTKMMRNLLCVHVNVS GNELCLMTS  
HLESTRGHAAERMNQLKMVLKKMQEAPESATVIFAGDTNLRDREVTRCGGLPNNIVDVWEFLGKPKHCQYTWD TQ  
MNSNLGITAACKLRFDRIFFRAAAEEGHIIPRSLDLLGLEKLD CGRFPSDHWGLLCNLDIIL

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**FIGURE 477**

CGCGCTTGTGGAGCTGGTGGCGGCGCTCCGCAGGGGCTCGGCTGTTTTCCGCGCGGCAGGCGCGGCCATGGCGCA  
GCTGGGAAAGCTGCTCAAGGAGCAGAAGTACGACCGGCAGCTGAGGTTGTGGGGTGATCATGGGCAAGAGGCTTT  
AGAATCTGCTCATGTTTTGCCTAATAAATGCAACAGCCACAGGAAGTGAATTCCTTAAAACTTGGTACTACCAGG  
TATTGGTTCGTTTACAATTATTGATGGAAATCAGGTCAGCGGAGAAGATGCTGGAAACAATTTCTTCCTTCAAAG  
AAGCAGTATCGGCAAGAACCGAGCTGAAGCTGCCATGGAATTCCTTACAAGAATTAAATAGCGATGTCTCTGGAAG  
TTTTGTGGAAGAGAGTCCAGAAAACCTTCTAGACAATGATCCCTCATTTTTCTGTAGGTTTACTGTTGTAGTTGC  
AACTCAGCTTCCTGAAAGCACTTCACTACGCTTAGCAGATGTCCTCTGGAATTCCCAGATTCCTCTTTTGATCTG  
TAGGACATATGGACTAGTTGGTTATATGAGGATCATTATAAAAGAACATCCAGTAATAGAATCTCATCCAGATAA  
TGCATTAGAGGATCTACGACTAGATAAGCCATTTCTGAACTGAGAGAACATTTTCAGTCCTATGATTTGGATCA  
TATGGAAAAAAGGACCACAGTCATACTCCATGGATTGTGATCATAGCTAAATATTTAGCACAGTGGTATAGTGA  
AACAAATGGACGAATACCTAAAACGTATAAAGAAAAAGAGGACTTCAGAGATTTGATTAGACAAGGAATTCTAAA  
AAATGAAATGGGGCTCCAGAAGATGAAGAGAATTTTGAAGAAGCTATTAAAAATGTGAACACAGCACTAAATAC  
AACTCAGATCCCAAGCAGTATTGAAGATATATTTAATGATGATCGCTGCATAAATATCACCAAACAGACTCCATC  
ATTTTGGATTTTAGCTCGTGCCTTAAAGGAATTTGTGGCCAAAGAGGGTCAAGGAAATTTACCTGTTTCGAGGCAC  
AATTCCTGATATGATTGCAGATTCAGGCAAATATATAAACTGCAAAACGTTTACCGTGAAAAAGCAAAGAAAGA  
TGCTGCCGCTGTGGGTAATCATGTTGCCAAATTGCTGCAGTCCATTGGCCAGGCACCAGAGTCCATTTAGAGAA  
AGAATTAAAATTACTCTGCAGCAATTCTGCATTTCTTCGAGTGGTAAGATGTCGATCCTTAGCTGAAGAATATGG  
TTTGGATACAATTAACAAGGATGAAATTATTTCTAGCATGGACAATCCAGATAATGAAATAGTGTGTACTTAAT  
GTTACGGGCTGTTGATAGATTTTATAAACAACAGGGTAGATATCCAGGAGTATCTAACTATCAAGTTGAAGAAGA  
TATAGGAAAGTTGAAGTCTTGTCTCACTGGCTTCCTTCAGGAATATGGTTTATCTGTAATGGTGAAAGATGATTA  
TGTCCACGAATTTTGCCGATATGGAGCTGCTGAGCCACATACCATTGCTGCATTCCTTGGGGGGAGCTGCTGCTCA  
AGAGGTCATCAAATAATCACCAAACAATTTGTAATTTTTAATAATACTTACATTTACAGTGGCATGTCACAAAC  
TTCAGCAACTTTCCAGTTGTAGAGTAAGCAAGCACCTTAAGTAGTGTGTTAATGATTGAACTGTAATTGCCTTC  
GGGTTGTGCTTTAGTCTGTAAAATTCTAAAGGAGAGCTGCTAAATTGTTTTCTTAATAAACATTTTTCTCATTTG  
TAAAAAAA

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**FIGURE 478**

MAQLGKLLKEQKYDRQLRLWGDHGQEALSAHVCLINATATGTEILKNLVLPGIGSFTIIDGNQVSGEDAGNNEF  
LQRSSIGKNRAEAAMEFLQELNSDVSGSFVEESPENLLDNDPSFFCRFTVVVATQLPESTSLRLADVLWNSQIPL  
LICRTYGLVGYMRIIIEHPVIESHPDNALEDLRLDKPFPELREHFQSYDLDHMEKKDHSHTPWIVIIAKYLAQW  
YSETNGRIPKTYKEKEDFRDLIRQGILKNENGAPEDDEENFEEAIKNVNTALNTTQIPSSIEDIFNDDRCINITKQ  
TPSFWILARALKEFVAKEGQGNLPVRGTIPDMIADSGKYIKLQNVYREKAKKDAAAVGNHVAKLLQSIGQAPESI  
SEKELKLLCSNSAFLRVVRCRSLAEYGLDTINKDEIISSMDNPDNEIVLYLMLRAVDRFHKQQGRYPGVSNYQV  
EEDIGKCLKSCLTGFLQEYGLSVMVKDDYVHEFCRYGAAEPHTIAAFLGGAAAQEVIKIITKQFVIFNNTYIYSGM  
SQTSATFQL

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**FIGURE 479**

AGGGACAGCCCAGAGGAGGCGTGGCCACGCTGCCGGCGGAAGTGGAGCCCTCCGCGAGCGCGAGGCCGCCGGG  
GCAGGCGGGGAAACCGGACAGTAGGGGCGGGGCCGGGCCGATGGGGATGCGGGAGCACTACGCGGAGCTGCA  
CCCGTGCCCGCCGGAATTGGGGATGCAGAGCAGCGGCAGCGGGTATGGCAGGCAGCCGGCGGGGCCGCCCTCCAGC  
GCAGGTGCCCCGAGAGGCAGGGGCTGGCCTGGGATGCGCGCGCACCTGCCCTCGCCCCGCCCGCCCGCACGAGGG  
GTGGTGGCCGAGGCCCGCCCCGCACGCCTCGCCTGAGGCGGGTCCGCTCAGCCCAGGCGCCCGCCCCGCCCGC  
GCCGATTAAATGGGCCGGCGGGGCTCAGCCCCCGAAACGGTCGTAACCTCGGGGCTGCGAGCGCGGAGGGCGAC  
GACGACGAAGCGCAGACAGCGTCATGGCAGAGCAGGTGGCCCTGAGCCGGACCCAGGTGTGCGGGATCCTGCGGG  
AAGAGCTTTTCCAGGGCGATGCCTTCCATCAGTCGGATACACACATATTTCATCATCATGGGTGCATCGGGTGACC  
TGGCCAAGAAGAAGATCTACCCACCATCTGGTGGCTGTTCCGGGATGGCCTTCTGCCGAAAACACCTTCATCG  
TGGGCTATGCCCGTTCCCGCTCACAGTGGCTGACATCCGCAAACAGAGTGAGCCCTTCTTCAAGGCCACCCAG  
AGGAGAAGCTCAAGCTGGAGGACTTCTTTGCCCGCAACTCCTATGTGGCTGGCCAGTACGATGATGCAGCCTCCT  
ACCAGCGCCTCAACAGCCACATGGATGCCCTCCACCTGGGGTCACAGGCCAACCGCCTCTTCTACCTGGCCTTGC  
CCCCGACCGTCTACGAGGCCGTACCAAGAACATTCACGAGTCCTGCATGAGCCAGATAGGCTGGAACCGCATCA  
TCGTGGAGAAGCCCTTCGGGAGGGACCTGCAGAGCTCTGACCGGCTGTCCAACCACATCTCTCCCTGTTCCGTG  
AGGACCAGATCTACCGCATCGACCACTACCTGGGCAAGGAGATGGTGCAGAACCTCATGGTGTGAGATTGGCCA  
ACAGGATCTTCGGCCCCATCTGGAACCGGGACAACATCGCCTGCGTTATCCTCACCTTCAAGGAGCCCTTTGGCA  
CTGAGGGTCGCGGGGGCTATTTGATGAATTTGGGATCATCCGGGACGTGATGCAGAACCACCTACTGCAGATGC  
TGTGTCTGGTGGCCATGGAGAAGCCCGCTCCACCAACTCAGATGACGTCCGTGATGAGAAGGTCAAGGTGTTGA  
AATGCATCTCAGAGGTGCAGGCCAACAAATGTGGTCTGGGCCAGTACGTGGGGAACCCCGATGGAGAGGGCGAGG  
CCACCAAAAGGTACCTGGACGACCCACGGTGCCCCGCGGGTCCACCACCGCCACTTTTGCAGCCGTCGTCTCT  
ATGTGGAGAATGAGAGGTGGGATGGGGTGCCCTTCATCCTGCGCTGCGGCAAGGCCCTGAACGAGCGCAAGGCCG  
AGGTGAGGCTGCAGTTCCATGATGTGGCCGGCGACATCTTCCACCAGCAGTGCAAGCGCAACGAGCTGGTGATCC  
GCGTGACGCCAACGAGGCCGTGTACACCAAGATGATGACCAAGAAGCCGGGCATGTTCTTCAACCCCGAGGAGT  
CGGAGCTGGACCTGACCTACGGCAACAGATACAAGAACGTGAAGCTCCCTGACGCCTACGAGCGCCTCATCCTGG  
ACGTCTTCTGCGGGAGCCAGATGCACTTCGTGCGCAGCGACGAGCTCCGTGAGGCCTGGCGTATTTTACCCAC  
TGCTGCACCAGATTGAGCTGGAGAAGCCCCAAGCCCATCCCCTATATTTATGGCAGCCGAGGCCCCACGGAGGCAG  
ACGAGCTGATGAAGAGAGTGGGTTTCCAGTATGAGGGCACCTACAAGTGGGTGAACCCCAACAAGCTCTGAGCCC  
TGGGCACCCACCTCCACCCCGCCACGGCCACCTCCTTCCCGCCGCCGACCCGAGTCGGGAGGACTCCGGGA  
CCATTGACCTCAGCTGCACATTCTTGCCCCGGGCTCTGGCCACCCTGGCCCGCCCCCTCGCTGCTGCTACTACCC  
GAGCCCAGCTACATTCTCAGCTGCCAAGCACTCGAGACCATCCTGGCCCCCTCCAGACCCTGCCTGAGCCAGGA  
GCTGAGTCACCTCCTCCACTCACTCCAGCCCAACAGAAGGAAGGAGGAGGGCGCCCATTCGTCTGTCCAGAGCT  
TATTGGCCACTGGGTCTCACTCCTGAGTGGGGCCAGGGTGGGAGGGAGGGACAAGGGGGAGGAAAGGGGCGAGCA  
CCCACGTGAGAGAATCTGCCTGTGGCCTTGCCCCGCCAGCCTCAGTGCCACTTGACATTCTTGTCAACAGCAACA  
TCTCGAGCCCCCTGGATGTCCCTGTCCCACCAACTCTGCACTCCATGGCCACCCCGTGCCACCCGTAGGCAGCC  
TCTCTGCTATAAGAAAAGCAGACGCAGCAGCTGGGACCCCTCCCAACCTCAATGCCCTGCCATTAAATCCGCAAA  
CAGCCAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 480**

MAEQVALSRTQVCGILREELFQGDAFHQSDTHIFIIMGASGDLAKKKIYPTIWWLFRDGLLPENTFIVGYARSRL  
TVADIRKQSEPPFKATPEEKLKLEDDFARNYSYVAGQYDDAASYQRLNSHMDALHLGSQANRLFYLALPPTVYEAV  
TKNIHESCMSQIGWNRIIVEKPFGRDLQSSDRLSNHISSLFREDQIYRIDHYLGKEMVQNLMLVLRFANRIFGPIW  
NRDNIACVILTFKEPFGTEGRGGYFDEFGIIRDVMQNHLLQMLCLVAMEKPASTNSDDVRDEKVKVLKCISEVQA  
NNVVLGQYVGNPDGEGEATKGYLDDPTVPRGSTTATFAAVVLYVENERWDGVPFILRCGKALNERKAEVRLQFHD  
VAGDIFHQQCKRNELVIRVQPNEAVYTKMMTKKPGMFFNPEESELDLTYGNNRYKNVKLPDAYERLILDVFCGSQM  
HFVRSDELREAWRIFTPLLHQIELEKPKPIFYIYGSRGFTEADELMKRVGFQYEGTYKWVNP HKL



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**FIGURE 481**

AGCTGAGGTGTGAGCAGCTGCCGAAGTCAGTTCCTTGTGGAGCCGGAGCTGGGCGCGGATTCCGCCGAGGCACCGA  
GGCACTCAGAGGAGGTGAGAGAGCGGCGGCAGACAACAGGGGACCCCGGGCCGGCGGCCAGAGCCGAGCCAAGC  
GTGCCCCGCTGTGTCCCTGCGTGTCCGCGAGGATGCGTGTTTCGCGGGTGTGTGCTGCGTTACAGGTGTTTCTGC  
GGCAGGCGCCATGTCAGAACCGGCTGGGGATGTCCGTCAGAACCCATGCGGCAGCAAGGCCTGCCGCCGCCTCTT  
CGGCCCAGTGGACAGCGAGCAGCTGAGCCGCGACTGTGATGCGCTAATGGCGGGCTGCATCCAGGAGGCCCGTGA  
GCGATGGAACCTTCGACTTTGTACCCGAGACACCACTGGAGGGTGACTTCGCCTGGGAGCGTGTGCGGGGCCTTGG  
CCTGCCCAAGCTCTACCTTCCACGGGGCCCCGGCGAGGCCGGGATGAGTTGGGAGGAGGCAGGCGGCCTGGCAC  
CTCACCTGCTCTGCTGCAGGGGACAGCAGAGGAAGACCATGTGGACCTGTCACTGTCTTGTACCCTTGTGCCTCG  
CTCAGGGGAGCAGGCTGAAGGGTCCCCAGGTGGACCTGGAGACTCTCAGGGTCGAAAACGGCGGCAGACCAGCAT  
GACAGATTTCTACCACTCCAAACGCCGGCTGATCTTCTCCAAGAGGAAGCCCTTAATCCGCCACAGGAAGCCTGC  
AGTCTTGAAGCGCGAGGGCCTCAAAGGCCCGCTCTACATCTTCTGCCTTAGTCTCAGTTTGTGTGCTTAATTA  
TTATTTGTGTTTTAATTTAAACACCTCCTCATGTACATACCCTGGCCGCCCCCTGCCCCAGCCTCTGGCATT  
GAATTATTTAAACAAAACTAGGCGGTTGAATGAGAGGTTCTAAGAGTGCTGGGCATTTTTATTTTATGAAATA  
CTATTTAAAGCCTCCTCATCCCGTGTCTCTCTCTCTCTCCCGAGGTTGGGTGGGCGGCTTCATGCCAGC  
TACTTCTCTCTCCCACTTGTCCGCTGGGTGGTACCCTCTGGAGGGGTGTGGCTCCTTCCCATCGCTGTACAGG  
CGGTTATGAAATTCACCCCTTTCTGGACACTCAGACCTGAATTCTTTTTTCAATTTGAGAAGTAAACAGATGGCA  
CTTTGAAGGGGCTCACCAGTGAGGCGCATCATAAAACTTTGGAGTCCCCTCACCTCCTCTAAGGTTGGGCAG  
GGTGACCTGAAGTGAGCACAGCCTAGGGCTGAGCTGGGGACCTGGTACCCTCCTGGCTCTTGATACCCCCTCT  
GTCTTGTAAGGCAGGGGAAGGTGGGTCTCTGGAGCAGACCACCCGCTGCCCTCATGGCCCTCTGACCTGC  
ACTGGGGAGCCCGTCTCAGTGTTAGCCTTTTCCCTCTTTGGCTCCCCTGTACCTTTTGAGGAGCCCCAGCTACC  
CTTCTTCTCCAGCTGGGCTCTGCAATTTCCCTCTGCTGCTGTCCCTCCCCCTTGTCCTTTCCCTTCAGTACCCTC  
TCAGCTCCAGGTGGCTCTGAGGTGCCTGTCCACCCCCACCCCCAGCTCAATGGACTGGAAGGGGAAGGGACACA  
CAAGAAGAAGGGCACCCCTAGTTCTACCTCAGGCAGCTCAAGCAGCGACCGCCCCCTCCTCTAGCTGTGGGGGTGA  
GGGTCCCATGTGGTGGCACAGGCCCTTGGAGTGGGGTTATCTCTGTGTTAGGGGTATATGATGGGGGAGTAGAT  
CTTTCTAGGAGGGAGACACTGGCCCTCAAATCGTCCAGCGACCTTCTCATCCACCCCATCCCTCCCCAGTTCA  
TTGCACTTTGATTAGCAGCGGAACAAGGAGTCAGACATTTTAAGATGGTGGCAGTAGAGGCTATGGACAGGGCAT  
GCCACGTGGGCTCATATGGGGCTGGGAGTAGTTGTCTTTCTGGCACTAACGTTGAGCCCCCTGGAGGCACTGAAG  
TGCTTAGTGTAAGTGGAGTATTGGGGTCTGACCCCAAACACCTTCCAGCTCCTGTAACTACTGGCCTGGACTGT  
TTTCTCTCGGCTCCCCATGTGTCCTGGTTCCCGTTTCTCCACCTAGACTGTAAACCTCTCGAGGGCAGGGACCAC  
ACCCTGTACTGTCTGTGCTTTTACAGCTCCTCCACAATGCTGAATATACAGCAGGTGCTCAATAAATGATTC  
TTAGTGACTTTAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 482**

MSEPAGDVRQNPCGSKACRRLFGPVDSEQLSRDCDALMAGCIQEARERWNFDVFTETPLEGDFAWERVRLGLPK  
LYLPTGPRRGRDELGGRRPGTSPALLQGTAEDHVDLSLSCTLVPRSGEQAEGSPGGPGDSQGRKRRQTSMTDF  
YHSKRRLIFSKRKP

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**FIGURE 483**

GTGGAACCTCGATATTGGTGGTGTCCATCGTGGGCAGCGGACTAATAAAGGCCATGGCGCCAGCAGAAATCCTGA  
ACGGGAAGGAGATCTCCGCGCAAATAAGGGCGAGACTGAAAAATCAAGTCACTCAGTTGAAGGAGCAAGTACCTG  
GTTTCACACCACGCCTGGCAATATTACAGGTTGGCAACAGAGATGATTCCAATCTTTATATAAATGTGAAGCTGA  
AGGCTGCTGAAGAGATTGGGATCAAAGCCACTCACATTAAGTTACCAAGAACAACCACAGAATCTGAGGTGATGA  
AGTACATTACATCTTTGAATGAAGACTCTACTGTACATGGGTTCTTAGTGCAGCTACCTTTAGATTGAGAGAATT  
CCATTAACACTGAAGAAGTGATCAATGCTATTGCACCCGAGAAGGATGTGGATGGATTGACTAGCATCAATGCTG  
GGAGACTTGCTAGAGGTGACCTCAATGACTGTTTCATTCTTGTACGCCTAAGGGATGCTTGGAACTCATCAAAG  
AGACAGGGGTGCCGATTGCCGGAAGGCATGCTGTGGTGGTTGGGCGCAGTAAATAGTTGGGGCCCCGATGCATG  
ACTTGCTTCTGTGGAACAATGCCACAGTGACCACCTGCCACTCCAAGACTGCCCATCTGGATGAGGAGGTAAATA  
AAGGTGACATCCTGGTGGTTGCAACTGGTCAGCCTGAAATGGTTAAAGGGGAGTGGATCAAACCTGGGGCAATAG  
TCATCGACTGTGGAATCAATTATGTCCAGATGATAAAAAACCAATGGGAGAAAAGTTGTGGGTGATGTGGCAT  
ACGACGAGGCCAAAGAGAGGGCGAGCTTCATCACTCCTGTTCTGGCGGCGTAGGGCCCATGACAGTTGCAATGC  
TCATGCAGAGCACAGTAGAGAGTGCCAAGCGTTTCTGGAGAAAATTAAGCCAGGAAAGTGGATGATTGAGTATA  
ACAACCTTAACCTCAAGACACCTGTTCCAAGTGACATTGATATATCACGATCTTGTAACCGAAGCCCATTGGTA  
AGCTGGCTCGAGAAAATTGGTCTGCTGTCTGAAGAGGTAGAATTATATGGTGAAACAAAGGCCAAAGTTCTGCTGT  
CAGCACTAGAACGCCTGAAGCACCGGCCTGATGGGAAATACGTGGTGGTGACTGGAATAACTCCAACACCCCTGG  
GAGAAGGGGAAAAGCACAACCTACAATCGGGCTAGTGCAAGCCCTGGTGCCCATCTCTACCAGAATGTCTTTGCGT  
GTGTGCGACAGCCTTCTCAGGGCCCCACCTTTGGAATAAAAGGTGGCGCTGCAGGAGGCGGCTACTCCCAGGTCA  
TTCCTATGGAAGAGTTTAATCTCCACCTCACAGGTGACATCCATGCCATCACTGCAGCTAATAACCTCGTTGCTG  
CGGCCATTGATGCTCGGATATTTTCATGAAGTGAACCCAGACAGACAAGGCTCTCTTTAATCGTTTGGTGCCATCAG  
TAAATGGAGTGAGAAGGTTCTCTGACATCCAATCCGAAGGTTAAAGAGACTAGGCATTGAAAAGACTGACCCTA  
CCACACTGACAGATGAAGAGATAAACAGATTTGCAAGATTGGACATTGATCCAGAAACCATAACTTGGCAAAGAG  
TGTTGGATACCAATGATAGATTCTGAGGAAGATCACGATTGGACAGGCTCCAACGGAGAAGGGTCACACACGGA  
CGGCCCAGTTTGATATCTCTGTGGCCAGTGAAATTATGGCTGTCTCTGGCTCTCACCCTTCTCTAGAAGACATGA  
GAGAGAGACTGGGCAAAATGGTGGTGGCATCCAGTAAGAAAGGAGAGCCCGTCAGTGCCGAAGATCTGGGGGTGA  
GTGGTGCACCTGACAGTGCTTATGAAGGACGCAATCAAGCCCAATCTCATGCAGACACTGGAGGGCACTCCAGTGT  
TTGTCCATGCTGGCCCGTTTGCCAACATCGCACATGGCAATTCCTCCATCATTGCAGACCAGATCGCACTCAAGC  
TTGTTGGCCCAGAAGGGTTTGTAGTGACGGAAGCAGGATTTGGAGCAGACATTGGAATGAAAAGTTTTTTAACA  
TCAAATGCCGGTATTCCGGCCTCTGCCCCACGTGGTGGTGCTTGTGGCCACTGTCAGGGCTCTCAAGATGCACG  
GGGGCGGCCCCACGGTCACTGCTGGACTGCCTCTTCCCAAGGCTTACATACAGGAGAACCTGGAGCTGGTTGAAA  
AAGGCTTCAGTAACTTGAAGAAACAAATTGAAAATGCCAGAATGTTTGGAAATCCAGTAGTAGTGGCCGTGAATG  
CATTCAAGACGGATACAGAGTCTGAGCTGGACCTCATCAGCCGCTTTCCAGAGAACATGGGGCTTTTGATGCCG  
TGAAGTGCACTCACTGGGCAGAAGGGGGCAAGGGTGCCCTTAGCCCTGGCTCAGGCCGTCCAGAGAGCAGCACAA  
CACCCAGCAGCTTCCAGCTCCTTTATGACCTCAAGCTCCAGTTGAGGATAAAATCAGGATCATTGCACAGAAGA  
TCTATGGAGCAGATGACATTGAATTACTTCCCGAAGCTCAACACAAAGCTGAAGTCTACACGAAGCAGGGCTTTG  
GGAATCTCCCCATCTGCATGGCTAAACACACTTGTCTTTGTCTCACAACCCAGAGCAAAAAGGTGTCCCTACAG  
GCTTCATTCTGCCCATTGCGGACATCCGCGCCAGCGTTGGGGCTGGTTTTCTGTACCCCTTAGTAGGAACGATGA  
GCACAATGCCTGGACTCCCCACCCGGCCCTGTTTTTATGATATTGATTTGGACCCTGAAACAGAACAGGTGAATG  
GATTATTCTTAAAACAGATCACCATCCATCTTCAAGAAGCTACTTTGAAAGTCTGGCCAGTGTCTATTTCAGGCCCCAC  
TGGGAGTTAGGAAGTATAAGTAAGCCAAGAGAAGTCAGCCCCCTGCCAGAGATCTGAAACTAATAGTAGGAGTT  
TCCCCAGAAGTCATTTTCAGCCTTAATTCTCATCATGTATAAATTAACATAAATCATGCATGTCTGTTTACTTTA  
GTGACGTTCCACAGAATAAAAGGAAACAAGTTTGC

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**FIGURE 484**

MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSNLYINVKLKAAEEIGIKATHIKLPRT  
TTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAIAPKDV DGLTSINAGRLARGDLNDCFIPCTPK  
GCLELIKETGVPIAGRHAVVVGSRKIVGAPMHDLLLWNNATVTTCHSKTAHLDEEVNKG DILVVATGQPEMVKGE  
WIKPGAIVIDCGINYVPDDKKPNGRKVVGDVAYDEAKERASFITPVGGVGPMTVAMLMQSTVESAKRFLKFKP  
GKWMIQYNNLNLKTPVPSDIDISRSCKPKPIGKLAREIGLLSEEVELYGETKAKVLLSALERLKH RPDGKYVVVT  
GITPTPLGEGKSTTTIGLVQALGAHLYQNVFACVRQPSQGP TFGIKGGAAGGGYSQVIPMEEFNLH LTGDIHAIT  
AANNLVAAAIDARIFHELTQTDKALFNRLVPSVNGVRRFSDIQIRRLKRLGIEKTDPTTLTDEEINRFARLDIDP  
ETITWQRVLDTND RFLRKITIGQAPTEKGHTRTAQFDISVASEIMAVLALTT SLEDMRERLGKMVVASSKKGEFV  
SAEDLGVS GALTVLMKDAIKPNLMQTLEGTPVFVHAGPFANIAHGNSSIIADQIALKLVGPEGFVVTEAGFGADI  
GMEKFFNIKCRYSGLC PHVVVLVATVRALKMHGGGPTV TAGLPLPKAYIQENLELVEKGFSNLKKQIENARMFGI  
PVVVAVNAFKTDTESELDLISRLSREHGAFDAVKCTHWAEGGKGALALAQAVQRAAQAPSS FQLLYDLKLPVEDK  
IRIIAQKIYGADDIELLPEAQHKAEVYTKQGFGNLPICMAKTHLSLSHNPEQKGVPTGFILPIRDIRASVGAGFL  
YPLVGTMTMPGLPTRPCFYDIDLDPETE QVNGLF

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**FIGURE 485**

CGCGATTCTCAGGGATTGATCCGCCTCTTCAGGTAAGTTATCTTCCGGCCCCGTACCACTGTGCCACAGGCGCAG  
CCCGCTTCCTCAGGTGCCCTATCCCGCGCAGAAGACCACGGCTTCACAGAGTGTTATTTAAGGGCGTGCCACGC  
GAACATCCCGCCCCATTCTGTGACGCACGGGGTGGCGCGCGTGGGACCCGAGGGGTGGGGCTGGGTTTAGTAGGA  
GACCTGGGGCAAGGCCCCCTGTGGACGACCATCTGCCAGCTTCTCTCGTTCGCTCGATTGGGAGGAGCGGTGGCG  
ACCTCGGCCTTCAGTGTTTCCGACGGAGTGAATGCGCGCGCGGCTGGGATGCTGCTGCTGGGCTTGCTGCAGGC  
GGGTGGGTGCGTGCTGGGCCAGGCGATGGAGAAGGTGACAGGCGGCAACCTCTTGCTCCATGCTGCTGATCGCCTG  
CGCCTTCACCCCTCAGCCTGGTCTACCTGATCCGTCTGGCCGCCGGCCACCTGGTCCAGCTGCCCCGAGGGGTGAA  
AAGTCCCTCCATACATTTTTCTCCCCAATTCCATTCTTGCGCATGCCATAGCATTGGGAAAAGTCCAATTGAATT  
TCTAGAAAATGCATATGAGAAGTATGGACCTGTATTTAGTTTTACCATGGTAGGCAAGACATTTACTTACCTTCT  
GGGGAGTGATGCTGCTGCACTGCTTTTTAATAGTAAAAATGAAGACCTGAATGCAGAAGATGTCTACAGTCGCCT  
GACAACACCTGTGTTTGGGAAGGGAGTTGCATACGATGTGCCTAATCCAGTTTTCTTGAGCAGAAGAAAATGTT  
AAAAAGTGGCCTTAACATAGCCCACTTTAAACAGCATGTTTCTATAATTGAAAAAGAAACAAAGGAATACTTTGA  
GAGTTGGGGAGAAAAGTGGAGAAAAAAATGTGTTTGAAGCTCTTCTGAGCTCATAATTTTAAACAGCTAGCCATTG  
TTTGCATGGAAAGGAAATCAGAAGTCAACTCAATGAAAAGGTAGCACAGCTGTATGCAGATTTGGATGGAGGTTT  
CAGCCATGCAGCCTGGCTCTTACCAGGTTGGCTGCCTTTGCCTAGTTTCAGACGCAGGGACAGAGCTCATCGGGA  
AATCAAGGATATTTTCTATAAGGCAATCCAGAAACGCAGACAGTCTCAAGAAAAAATTGATGACATTCTCCAAAC  
TTTACTAGATGCTACATACAAGGATGGGCGTCTTTGACTGATGATGAAGTAGCAGGGATGCTTATTGGATTACT  
CTTGGCAGGGCAGCATACATCCTCAACTACTAGTGCTTGATGGGCTTCTTTTTGGCCAGAGACAAAACACTTCA  
AAAAAATGTTATTTAGAACAGAAAACAGTCTGTGGAGAGAATCTGCCTCCTTTAACTTATGACCAGCTCAAGGA  
TCTAAATTTACTTGATCGCTGTATAAAGAAACATTAAGACTTAGACCTCCTATAATGATCATGATGAGAATGGC  
CAGAACTCCTCAGACTGTGGCAGGGTATACCATTCCAGGACATCAGGTGTGTGTTTCTCCCACTGTCAATCA  
AAGACTTAAAGACTCATGGGTAGAACGCCTGGACTTTAATCCTGATCGCTACTTACAGGATAACCCAGCATCAGG  
GGAAAAGTTTGCCTATGTGCCATTTGGAGCTGGGCGTCATCGTTGTATTGGGGAAAATTTTGCCTATGTTCAAAT  
TAAGACAATTTGGTCCACTATGCTTCGTTTATATGAATTTGATCTCATTGATGGATACTTTCCCACTGTGAATTA  
TACAATATGATTACACCCCCCTGAGAACCCAGTTATCCGTTACAAACGAAGATCAAAATGGAAAAAGGTTGCAAGG  
AACGAATATATGTGATTATCACTGTAAGCCACAAAGGCATTGCAAGAGAATGAAGTGACAAAACAACCTCTTGTA  
GTTTACTGTTTTTTTTAAGTGTGTAATTTCTAAAAGCCAGTTTATGATTTAGGATTTTGTTAACTGAATGGTTCTAT  
CAAATATAATAGCATTTGACACATTTTCTAATAGTTATGATACTTATACATGTGCTTTTCAGGAAGTTTCTTGCTG  
AAACAATTGTTGAGGGGGGATCTAGGTAATTGGCAGATTCTAAATAATATAATTTCCAGATAGTAATTTTAAAGAG  
TACTCATCGCTCTTGCCAAATAAGTTCAGGGTATTCAAATCTTGACTAGTCCGCAAGGTATAAAGAATAAAAA  
TCCCAGTGAGATACTTGGAACCCACAGTTTATTATTATTTATCTGGGCAATTATTGTGTGTGTGAGGATGGAAGG  
GTAGGGAATAATCGAACATCTAAAGCCTTGAATAAGAGAATACTAATTGTTTGGTATGATGATACTCAGAAATG  
GAGATATTATAGGAAAAAGAAATCCTTTGGAATTTTAACTAAAATCACTGCATATGGGAAATTAAGAGATCCAGG  
ACCATATTTGATAAGAGTTCTTAAATAATGTAATTATTAATGCTAAAGACTGCTCATGTATCTTGATCTAATT  
ACTAAATAAATTACATATTTATTTACCTGATAAATATGTATCTAGTTCTACAAGGTCACATTTATGTGGAAGTCC  
AAAGTCAAGTCCTTAGGGGATAATTTGTTTTGGGCTCAGTTGTTCCCTGCTTCCTTTTTTTTTTTTTTTTTTTT  
TTGAGATGGAGTCTCGCTCTGTTGCCAGGCTGGAGTGCAGTGGTGCGATCTCAGCTCACTGCATCCTCTGCCTC  
CCGGTTCAAGCAATTCTCTGCCTCAGCCTCCCAAGTAGTTGGGATTACAGGCACCTGCCACCATGCCTGGCTAA  
TTTTTTGTATTTTATAGTAGAGACGGGGGTTTCACTATGTTGGCTAGGCTGGTCTTGAACCTCTGAGCCTCGTGAG  
TCCACCCGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGCACCTGGCCTTCCCTGCTTCCTCT  
CTAGAATCCAATTAGGGATGTTTGTACTACTCATATTGATTAAAACAGTTAAACAAACTTTTTTCTTTTTTAAAT  
GTGAGATCAGTGAACCTCTGGTTTTAAGATAATCTGAAACAAGGTCCTTGGGAGTAATAAAATTGGTCACATTCTG  
TAAAGCACATTCTGTTTAGGAATCAACTTATCTCAAATTGTAACTCGGGGCCTAACTATATGAGATGGCTGAAAA  
AATACCACATCGTCTGTTTTCACTAGGTGATGCCAAAATATTTTGCTTTATGTATATTACAGTTCTTTTTTAAAC  
ACTGGAAGACTCATGTTAAACTCTAATTGTGAAGGCAGAATCTCTGCTAATTTTTCAGATTAAATTTCTCTTTGA  
AAAAAT

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**FIGURE 486**

MAAAAGMLLLGLLQAGGSVLGQAMEKVTGGNLLSMLLIACAFTLSLVYLIRLAAGHLVQLPAGVKSPPIYFSP  
FLGHAIAFGKSPIEFLENAYEKYGPVFSFTMVGKTFITYLLGSDAAALLFNSKNEDLNAEDVYSRLTTPVFGKVA  
YDVNPVVFLEQKMLKSGLNIAHFKQHVSIIEKETKEYFESWGESGEKNVFEALSELIILTASHCLHGKEIRS  
NEKVAQLYADLDGGFSHAALLPGWLPLPSFRRRDRAHREIKDIFYKAIQRRQSQEKIDDILQTLDDATYKDGR  
PLTDDEVAGMLIGLLLAGQHTSSTTSAWMGFFLARDKTLQKKCYLEQKTVCGENLPPLTYDQLKDLNLLDRCI  
TLRLRPPIMIMMRMARTPQTVAGYTIPPGHQVCVSPTVNQRLKDSWVERLDFNPDRLQDNPASGEKFAYVPFGA  
GRHRCIGENFAYVQIKTIWSTMLRLYEFDLIDGYFPTVNYTTMIHTPENPVIRYKRRSK

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**FIGURE 487**

ACCGCCGACGCAGACCCCTCTCTGCACGCCAGCCCGCCCGCACCCACCATGGCCACAGTTCAGCAGCTGGAAGGA  
AGATGGCGCCTGGTGGACAGCAAAGGCTTTGATGAATACATGAAGGAGCTAGGAGTGGGAATAGCTTTGCGAAAA  
ATGGGCGCAATGGCCAAGCCAGATTGTATCATCACTTGTGATGGTAAAAACCTCACCATAAAAACTGAGAGCACT  
TTGAAAACAACACAGTTTTCTTGTACCCTGGGAGAGAAGTTTGAAGAAACCACAGCTGATGGCAGAAAACTCAG  
ACTGTCTGCAACTTTACAGATGGTGCATTGGTTCAGCATCAGGAGTGGGATGGGAAGGAAAGCACAATAACAAGA  
AAATTGAAAGATGGGAAATTAGTGGTGGAGTGTGTCATGAACAATGTCACCTGTACTCGGATCTATGAAAAAGTA  
GAATTAAAAATTCCATCATCACTTTGGACAGGAGTTAATTAAGAGAATGACCAAGCTCAGTTCAATGAGCAAATCT  
CCATACTGTTTCTTTCTTTTTTTTTTTTTCATTACTGTGTTCAATTATCTTTATCATAAACATTTTACATGCAGCTAT  
TTCAAAGTGTGTTGGATTAATTAGGATCATCCCTTTGGTTAATAAATAAATGTGTTTGTGCT

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**FIGURE 488**

MATVQQLEGRWRLVDSKGFDEYMKELGVGIALRKMGAMAKPDCIITCDGKNLTIKTESTLKTTQFSC TLGEKFEE  
TTADGRKTQTVCNFTDGALVQHQEWDGKESTITRKLKDGLVVECMNNVTCTRIYEKVE



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**FIGURE 489**

TTTTTTTTTTTTTACCATATGCTTATGTTTATTGTACAGTCACAAGTTACATGTTGTAAATCAAGCAGAACACTG  
TACCAGTTTTCACTAACTCAAATCAAGTTAGCAAATTACAAATTTTAGAACAGATTCAATTTCTGTCTCACCCAA  
TGTGGGTGACCACAAAGATATTTACTTTCTATGTTATTAGGTAGCAAATTAATTTGATATACTACACAGCTTCCA  
AGTTACCTTAGGATATTTCAAAGTGTTTCAAACTGGTAAAGAATAATTCATTTCCAGCCTGAAATACAATGCAG  
AATGGACCATTTAGGGGTAAATAACCTCACTTAATCACTCTTTCCTGGCTAACAAAAATAATACCAAATATTTGG  
GTTATAATTAGGGCTTACTAAAATTAATGGXCCACTTTGGAAATTATCCAGGATTGGGXTACATTGGGTAAAATG  
GCCCCTGGGGGACCATTGGCXAAAAAC

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**FIGURE 490**

TGGCCGAAGCAGGGGGACAGCAAGGGACGCTCAGGCGGGGACC**ATCG**GCGGACGGCGGCTCGGAGCGGGCTGACGG  
GCGCATCGTCAAGATGGAGGTGGACTACAGCGCCACGGTGGATCAGCGCCTACCCGAGTGTGCGAAGCTAGCCAA  
GGAAGGAAGACTTCAAGAAGTCATTGAAACCTTCTCTCTCTGAAAAAGCAGACTCGTACTGCTTCCGATATGGT  
ATCGACATCCCGTATCTTAGTTGCAGTAGTGAAGATGTGCTATGAGGCTAAAGAATGGGATTTACTTAATGAAAA  
TATTATGCTTTTGTCCAAAAGGCGGAGTCAGTTAAACAAGCTGTTGCCAAAATGGTTCAACAGTGCTGTACTTA  
TGTTGAGGAAATCACAGACCTTCCTATCAAACCTTCGATTAATTGATACTCTACGAATGGTTACCGAAGGCAAGAT  
TTATGTTGAAATTGAGCGTGCGCGACTGACTAAAACATTAGCAACTATAAAAGAACAAAATGGTGATGTGAAAGA  
GGCAGCCTCCATTTTACAGGAGTTACAGGTGGAAACCTACGGGTCAATGGAAAAGAAAGAGCGAGTGGAATTTAT  
TTTGGAGCAAATGAGGCTCTGCCTAGCTGTGAAGGATTACATTCGAACACAAATCATCAGCAAGAAAAATTAACAC  
CAAATTTTCCAGGAAGAAAATACAGAGAAATTAAGTTGAAGTACTATAATTTAATGATTAGCTGGATCAACA  
TGAGGGATCCTATTTGTCTATTTGTAAGCACTACAGAGCAATATATGATACTCCCTGTATACAGGCAGAAAGTGA  
AAAATGGCAGCAGGCTCTGAAGAGTGTTGTACTCTATGTTATCCTGGCTCCTTTTGACAATGAACAGTCAGATTT  
GGTTACCCGAATAAGTGGTGACAAGAAGTTAGAAGAAATCCCAAATACAAGGATCTTTTAAAGCTTTTTACCAC  
AATGGAGTTGATGCGTTGGTCCACACTTGTGAGGACTATGGAATGGAATTAAGAAAAGGTTCCCTTGAGAGTCC  
TGCAACGGATGTTTTTGGTTCTACAGAGGAAGGTGAAAAAGGTGGAAAGACTTGAAGAACAGAGTTGTTGAACA  
TAATATTAGAATAATGGCCAAGTATTATACTCGGATAACAATGAAAAGGATGGCACAGCTTCTGGATCTATCTGT  
TGATGAGTCCGAAGCCTTTCTCTCAAATCTAGTAGTTAAACAAGACCATCTTGTCTAAAGTAGACAGATTAGCAGG  
AATTATCAACTTCCAGAGACCCAAGGATCCAAATAATTTATTAAATGACTGGTCTCAGAACTGAACTCATTAAAT  
GTCTCTGGTTAACAAAACACTACGCATCTCATAGCCAAAGAGGAGATGATACATAATCTACAAT**TAAG**GGTCTTAGTG  
CTTTAGAAAAAAGTTAAATTTGGAAGTCATTAAAAAAGACTGTTATAATGGTGTATATGTTGGGGTTTTTTTTTC  
TAAGCTTCTTTGTCTTAAATTTTAAATAGTGAATATGTTTGAGACTCCCTTTGACCTTTTCAAGTTCCCCAAGTTC  
ATTGTTAACTTTGCATTTGCAATTGGTGCAAAAATACAGATTTCTGTCTGCTGAATACACAAAAAGTTGTGTCTAT  
AACTTACCCAGATATGTTTTTCTATCATTGAAACCTTTTTAGCTACTGTTTGTGTTTTCATTCAACTAACAAACAT  
ATTCCAATAATAAAGCAGTATATACATATTTCTTTCTACAGTTACCTCTGATTCTCAACATTTTGTGGGGTAG  
TGATTTGGCAAGTGTTTTTAAATAAAACAAATCTCATTGTAAAGTTATCAGTCATTTAGTAGAATAGAAAAGCA  
ACATAGAGCATACAAGAACATTTGGGATAGAGTTGTGATTGTGAAGAATTTGTACTTTGATATTGTGGCGGAAA  
GTCTAGACTGAGTGTGTATGCTGGTAAACTGTAGACTTTTTTTTTTTTTTTTTTTTGTAGTCCGGCTGGTTCCAATCACA  
GTAGCTTGATTGCTTTCAGCCCTCATCCTCTCACTTGATCAGTTGTTCAACAGAATCAGCTGACATAATTGACAC  
AGTTTATTGGGTGTTAAGTCCGCTCTATAGGGATAGTGACTACTTTTTTTTTTTTTTTTTTTTGTCTCTTCTTC  
CTCTCCCCCTTCTTTATATGGGTTTAAATTTAACATAAAGTTGTTTTTATAAGGCTTATTTGTGGCTTTAACTTG  
TAAGTCTGATTACATCATTATTGTTCCAAATTCATTATCTCTGTAGGAACCTTTAGTTCCATTATATGAACACTG  
GATAACCTAATTTTTTTTAAATGCTTTAAAAAATGGCAAAAAGACGTCAGGCCACCCTCATAGTAAGTGGTGTAG  
TATTAATAATTTTTCACGGAATTAAGTAGCTTGCTGTCAAAGAAACACCTGAGATGAATTGGTGTGAACGAAT  
TTTGCAAGTTAATTTGATTATTTTCAGAGAAAATAGAAAAACAATGTTAGAAGGTTATTTAAATGATACTTA  
AATAAAGAAAGTGTGAGGTCTACTTTAAAAAATTCAAATGAAGAGAAAAAGAAAAACAGCATTCTAGAAATGGC  
ATTTCTCCTAATTAATTTTCCACTTAATGGAAGATTATCAATTGTCTATTTTATGATCCAGGACTGAAGACAG  
TTGTGGGATATCTGTCATATTTATCCTGTGAGTCATTGTGAATAATGACATACAGTACTGAAGTAATCTGATTTT  
ATTCTTTGGAAATTCATGTCATTGGTCACACTAATAACATCAACATCTGCTATCACTTATCTTTTTAAACTAAC  
CAAAAAGGCTGGGATTACAGGCATGAGCCACTGCACCCAACCTCCTCTTTCGTCTTTCTTTAACACACACTAGGC  
TCTTTGTGTATTATGATTCAGTGCTATTTGTAACCTGTGTCCAGTGACCAAATTGCACTCGACTCGATCAGCTGT  
TCATCCATTTTCGTGTTTTTCCCTGTCAAACATTAATCCAGCAAATATATGAGGTATTTACCAATTTATTTTCTTA  
GTATTACAAAATAATTCATTAGCATAAAGTACAATAGTGAAATATTTGAGTTGTTGCGGAACCTCAATTAATCCTG  
TTTTACATTTTCAGACCTAAAGCTGGCAATCAGGAGAAGAAGCACTTTGTTTTAAATGTGGAGAAGATAACACTTG  
ATTCCATTTTCATTGTTCATTAGTGTATTAACCAGCAGGAGAGGTGATGAGCCATTTTCAAATGAAATACCTTTTA  
TTTCCATATAATTTTTTTTATTTTAGAGTTCAATAGCTGTTTCTATGATTATCCTCAATTTCCATATGTTACTGAA  
TCTGAAAAACATCTTTAAATTCAAACAGTTCCATTTTCTCTCTTGTAAGTGTTAAATGTGATAAAAGTACATAT  
TTTAAATTTGTTTTTCAGCTCTTGGATATAGCAGCAATAAAACACTAATTTGTGGGTATTTAAGAAAACCTGGAGA  
ATAAACTCATACTTTAAAGATC

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**FIGURE 491**

MADGGSERADGRIVKMEVDYSATVDQRLPECAKLAKKEGRLQEVIETLLSLEKQTRTASDMVSTSRILVAVVKMCY  
EAKEWDLLNENIMLLSKRRSQLKQAVAKMVQQCCTYVEEITDLPKRLRLIDTLRMVTEGKIYVEIERARLTKTLA  
TIKEQNGDVKEAASILQELQVETYGSMEKKERVEFILEQMRLCLAVKDYIRTQIISKKINTKFFQEENTEKLLK  
YYNLMIQLDQHEGSYLSICKHYRAIYDTPCQAESEKWQQALKSVVLYVILAPFDNEQSDLVHRISGDKKLEEIP  
KYKDLLKLFITMELMRWSTLVEDYGMELRKGSLESPATDVFGSTEEGEKRWKDLKNRVVEHNIRIMAKYYTRITM  
KRMAQLLDLSVDESEAFLSNLVVNKTIFAKVDRLAGIINFQRPKDPNNLLNDWSQKLNSLMSLVNKTTHLIAKEE  
MIHNLQ

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**FIGURE 492**

TTGGTCTAAGACATGGGCTGACAACTTTTTCCATAAAGGGCCAGAAAGTAAATATTTTCAGGCTTTGTGGGATAT  
CTATTTATGATTTATTTTACTCCTAGTATTATTTTCATCTTTTATACAGGTTATTAAGGTTAGTATTGCTGCATAA  
CAAAATTACTCCAAAATTTAATCATTTATATTCAAGAAGAGTTCAGCTGCTAGGTTCTTATTTTGGGACTCTCATG  
ATGCTGAGGTCAAGATGCCAGCTGGAGGCCAGGCGCCGCAGCTCACGCCTGTAATCCCAGCGTTTTTGGGAGGCCA  
GGGGCCTCCCAAATTCAAAAGGAAGAGACAAAGTCCACATCTGTCAATGCGAAGAATGGAAAGGTCACATATCAT  
ATGTGGAGCGGGACATAACAACCTTCGGAAATTAATCTCTTCCCCAGGTCAGTGTGCGGGCCTTCCACGCTGCCA  
GCGGAACACTGGAATGGCGGAAGGGGAACGGGTACGGCAGGGGGAAAGGCTGGGGGTGGGGTCGGGTCGAGTCGA  
GGGAAGCTGGCCCCGAGTGTGGACAGAGATGGCGGTCTGCGCGTCTGTTGTTCCCAGCGCTCTGCGAAGCCTGAAA  
AGGAGGAGCAACCTGTCCAGAATCCCCGCAGGTCCGTGAAAGACAGGAAAAGGAGGGGAAATCTCGACATGGAAA  
AACTCTACAGTGAAAATGAAGGAATGGCTTCAAACCAAGGAAAGATGGAAAATGAAGAACAGCCACAAGACGAGA  
GAAAGCCAGAAGTAACCTTGTAATCTGGAAGACAAGAAGTTAGAAAACGAGGGAAAGACAGAAAAACAAGGGCAAAA  
CAGGAGATGAGGAAATGTTAAAGGATAAAGGAAAGCCAGAGAGTGAGGGAGAGGCAAAAGAAGGAAAGTCAGAGA  
GGGAGGGAGAGTCAGAGATGGAGGGAGGATCAGAGAGAGAGGGAAAACCAGAGATAGAGGGAAAGCCAGAGAGTG  
AAGGAGAGCCAGGGAGTGAAACAAGGGCTGCAGGAAAAGCGCCAGCTGAGGATGATGTACCCAGGAAAAGCCAAAA  
GAAAAACTAATAAGGGGCTGGCTCATTACCTCAAGGAGTATAAAGAGGGCCATACATGATATGAATTTTCAGCAATG  
AGGACATGATAAGAGAATTTGACAATATGGCTAAGGTGCAGGATGAGAAGAGAAAAAGCAAACAGAAAATTGGGGG  
CGTTTTTGTGGATGCAAAGAAATTTACAGGACCCCTTCTACCCTAGAGGTCCAAGGGAATTCAGGGGTGGCTGCA  
GGGCCCCACGAAGGGACATTGAAGACATTCCCTTATGTGTAGTGCCCTGGCAGGCATTTACCAGGCCATGTGCTT  
TAACGTTACGGTAATACTTTACTTTAGGCATCCCTCCTGTTGCTAGCAGCCTTTTGACCTATCTGCAATGCAGTG  
TTCTCAGTAGGAAATGTTTCATCTGTTACATGGAAAAAATGTTGATGGTGCATTGTAAAATTAAAAAACACAACCTT  
GCAGAACCAAAAAAAAA

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**FIGURE 493**

MPAGGQAPQLTPVIPAFWEARGLPNSKGRDKVHICQCEEWKGHISYVERDITTSEIKSLPQVSVRAFHAASGTLE  
WRKGNGYGRGKGWGWGRVESREAGPSVDRDGGLRVCCSQRSAPKEKEEQPVQNPRRSVKDRKRRGNLDM EKLYSE  
NEGMASNQGKMENEEQPQDERKPEVTCTLEDKKLENEGKTENKGKTGDEEMLKDKGKPESEGEAKEGKSEREGES  
EMEGGSEREGKPEIEGKPESEGEPPGSETRAAGKRPAEDDVPRKAKRKTNKGLAHYLKEYKEAIHDMNFSNEDMIR  
EFDNMAKVQDEKRKSKQKLGAFLWMQRNLQDPFFYPRGPREFRGGCRAPRRDIEDIPYV

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**FIGURE 494**

ATAAATATTGGAAATGACAACTTTAACAATTCTATATGTACACAGGACACTGAAAACATAAAATCATGAACAAGG  
CCAAAAAATAACGTTGCACATTAACCCCTTTAGTTATTACTTTCTATTTTCCAGTCCCAGCATCATACCTGCTAAT  
TACTCAGATCACAAGCCTCAAGGATTAAGTGTTTTGAATGTATTTTCAGTTTCATACTTTAACAATGCTTAAAGAC  
TATTGGTTGTATTCTGATCAAATGGTTCTCCTTCCCATATTTCCCTTTCTCAATAGATCTTANACAAAAAGGTGA  
GCAGGGAAAACGTGTGATTACAGGATCCAACATGACAGGTATACCCAATGATTCATTTAAGGGTGGCATAAAGTTA  
TATAGAAAAGACCTACAGGACGGAAGACAAGTACATCAACATGTAGTGAAATTAAGCAGTTCACCCACTGCGTGC  
TTACATGGCTCCTATATCTCTTCGGGAAGAAGCCAGAGCCGTAGAAGAAGTCAGGGCAAACCAGAACTGTTGAGG  
AGTATGGGTGGGGGGCAGAAGGAAGGGACTGGGGGAAAA

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**FIGURE 495A**

GTACTCTCGCGGTATTTGTCCCGACTCTCGCGGGGTTTAGCGTGGCATTGGGAGGCCCGGCCTGGGGGAGGAGAC  
GGCGTTCCGTTAGCGGCGTTGGGGTTTGGCTGCAGTGGCAGTGCTTTCTCTTCTGCTCACGGGGACCCGCTCAGG  
CTGGAGGCCAGCCAGCTCTTGCCGCCACCTCGGTTCGCGATGGGGGGCGCAGGACCGGCCCGCAGTGCCACTTCGACA  
TCGAGATCAACCGGGAGCCGGTTGGTTCGCATTATGTTTCAGCTCTTCTCAGACATATGTCCAAAAACATGCAAAA  
ACTTCCTTTGCTTGTGCTCAGGAGAGAAAGGCCTTGGGAAAACAACCTGGGAAGAAGTTATGTTATAAAGGTTCTA  
CGTTCCATCGTGTGGTTAAAACTTTATGATTACAGGGTGGGGACTTCAGTGAAGGTAATGGAAAAGGTGGAGAAT  
CAATTTATGGTGGATATTTTAAAGATGAAAACCTTTATTCTCAAACATGACAGAGCGTTCTTTTATCAATGGCAA  
ATCGAGGGAAACATACCAATGGTTCCCAGTTTTTCATTACCACAAAGCCTGCTCCACACCTGGATGGGGTGCATG  
TAGTCTTTGGACTGGTTATTTCTGGTTTTGAAGTAATCGAACAAATTGAAAATCTGAAGACCGATGCTGCAAGCA  
GACCATATGCAGATGTGCGAGTTATTGACTGTGGAGTACTTGCCACAAAATCAATAAAAGATGTTTTTGGAAAA  
AAAGGAAGAAACCAACTCATTGAGAAGGCTCGGATTCTCTTCCAATTCTCTCTCTTCTTCAGAATCATCTTCAG  
AAAGTGAACCTGAACATGAGAGAAGCAGAAGGAGGAAACATAAGAGGAGGCCAAAAGTTAAACGTTCTAAAAAGA  
GGCGAAAGGAAGCAAGCAGTTCAGAAGAGCCAAGGAATAAACATGCAATGAACCCAAAAGGTCACTCTGAGAGGA  
GTGATACCAATGAAAAAAGGTCAGTTGATTCCAGTGCTAAAAGGGAAAAACCTGTGGTCCGCCCAGAAGAGATTCT  
CTCCAGTGCCGTGAGAACCGATTTTTACTGAGAAGAGATATGCCTGTTGTTACTGCAGAACCTGAACCGAAGATTCT  
CTGATGTTGCACCCATTGTAAGTGATCAGAAACCATCTGTATCAAAGTCTGGACGGAAGATTAAAGGAAGGGGCA  
CAATTGCTATCACACACCTCCAAGATCAAGATCCTGTTCTGAGTCAGATGATGATGACAGCAGTGAAACTCCTC  
CTCACTGGAAAGAGGAAATGCAGAGATTAAGAGCATATAGACCACCTAGTGGAGAAAAATGGAGTAAAGGAGATA  
AGTTAAGTGACCCCTGTTCAAGCCGATGGGATGAAAGAAGCTTGTCTCAGAGATCCAGATCATGGTCTCTATAATG  
GATATTATTAGACCTTAGTACAGCAAGACACTCTGGCCACCATAAAAAACGCAGAAAAAGAAAAAAGGTTAAGC  
ATAAAAAAGAAAGGGAAAAAGCAGAAACACTGCAGAAGACACAAACAAACAAAGAAGAGAAGGATTCTTATACCGT  
CTGACATAGAATCCTCAAAATCTTCCACTCGAAGAATGAAATCCTCTTGTGATAGAGAAAGGAGTTCTCGTTCTT  
CCTCATTGTATCTCATCACTCATCAAAGAGAGACTGGTCTAAATCTGATAAGGATGTCCAGAGCTCTTTAACCC  
ATTCCAGCAGAGACTCATACAGATCAAAATCTCACTCACAGTCTTATTCTAGAGGAAGCTCAAGATCAAGGACTG  
CGTCAAAGTCTCATCACATTCTCGAAGTAGATCAAAGTCCAGATCTAGTTCCAAGTCTGGGCACCGAAAGAGAG  
CATCAAATCACCAAGAAAAACAGCTTCTCAGTTAAGTGAAAATAAACCAAGTTAAACAGAACCTTTAAGAGCAA  
CCATGGCACAAAATGAAAATGTAGTAGTACAACCAGTTGTAGCAGAAAAATATCTCTGTAATACCACTGAGTGACA  
GTCCCCCCCCCTTCAAGATGGAAGCCTGGACAGAAACCTTGGAAAGCCCTCTTATGAGCGAATTCAGGAAATGAAAG  
CTAAACAACCCATTTGCTACCCATCCAAAGCACTTACAGTTTAGCAAAATATTAAAGAGACTGGTAGCTCATCAT  
CCTACCATAAAAGAGAAAAAAATTCGGAAAGTGATCAGAGCACTTATTCAAAATACAGTGATAGAAGTTCAGAAA  
GCTCACCAAGGTCAAGGAGCAGATCTTCTAGGAGTAGATCTTATTCCAGATCATATACAAGATCACGTAGTCTAG  
CTAGTTACATTCAAGGTCTAGGTCTCCATCATCTAGATCTCATTACGAAATAAATACAGTGATCATTACAGT  
GTAGTAGATCATCTTCATATACTTCTATTAGCAGTGATGATGGAAGGCGAGCTAAGAGGAGACTTAGATCCAGTG  
GGAAAAAAATAGCGTTTCATATAAAAAGCATAGCAGCAGCTCTGAAAAGACACTTCACAGTAAATATGTCAAAG  
GTAGAGACAGGTCTTCATGTGTGAGAAAGTATAGCGAGAGCAGATCATCTTTAGATTATTCTTCAGACAGTGAGC  
AGTCAAGTGTTTCAGGCCACACAGTCAGCCCAGGAAAAAGAGAAGCAGGGCCAAATGGAAAGAACACATAATAAAC  
AAGAAAAAACAGAGGTGAAGAAAAATCCAAGTCTGAACGGGAATGCCCTCATTCAAAAAAAGAAGCTTTGAAAG  
AGAATCTTTCTGATCACCTTAGAAATGGCAGTAAGCCCAAAGGAAGAATTATGCTGGTAGTAAATGGGACTCTG  
AGTCAAATTCAGAACGAGATGTCACTAAAAACAGTAAAAATGACTCCCATCCATCCTCTGACAAGGAAGAAGGTG  
AGGCCACATCCGATTCTGAATCAGAGGTTAGTGAATTCACATCAAAGTCAAACCCACAACCAAGTCGTCCACAA  
ATACTTCACTGCCTGATGATAATGGTGCTTGGAAATCAAGCAAACAGCGCACATCAACTTCTGACTCTGAGGGGT  
CCTGTTCCAATTCGGAAAAACAATAGGGGAAAGCCACAAAAGCACAAACATGGGTCAAAGGAAAATCTTAAAGAG  
AACACACCAAAAAAGTGAAAGAGAAATGAAAGGGGAAAAAGACAAAAAGCATAAGGCTCCAAAACGAAAGCAAG  
CATTTCACTGGCAGCCTCCACTAGAATTTGGTGAAGAGGAGGAGGAGGAGATTGATGACAAGCAAGTTACTCAGG  
AATCAAAGAGAAAAAAGTTTCTGAAAACAATGAAACCATAAAAGATAATATTCTAAAAACTGAGAAATCCAGTG  
AAGAGGACCTTTCAGGTAAACATGATACAGTGACTGTTTCATCAGATCTTGATCAGTTTACTAAAGATGATAGTA  
AACTCAGTATTTCTCCACAGCTTTAAATACTGAGGAAAATGTGGCCTGTTTACAAAACATTCAGCACGTTGAAG  
AAAGTGTTCCCAATGGAGTGGAAGATGTGCTTCAAACAGATGACAACATGGAGATCTGCACTCCTGATAGGAGTT

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**FIGURE 495B**

CCCCAGCAAAAGTAGAGGAGACTTCCCCTCTAGGAAATGCACGGCTTGATACCCAGATATAAACATTGTTTTGA  
AGCAGGATATGGCAACGGAACATCCTCAAGCAGAGGTAGTAAAACAGGAAAGCAGCATGTCCGAAAGTAAAGTGT  
TGGGTGAAGTGGGGAAACAGGACAGCAGCTCTGCTAGCTTGGCTAGTGCTGGAGAAAGTACCGGGAAGAAGGAGG  
TGGCTGAGAAAGAGCCAGATCAACCTCATTGATAAGAAATGGAAGCCCCCTGCAAGGTGTGGGGAACCTGGCAGCAC  
CTAATGCTGCCACATCCAGTGCTGTGGAAGTTAAGGTGTTGACCACCTGTGCCTGAAATGAAACCACAAGGCTTGA  
GAATAGAAAATTTAAAGCAAAAATAAAGTTCGGCCTGGGTCTCTCTTTGATGAAGTAAGAAAGACAGCACGCTTAA  
ACCGTAGACCAAGAAATCAGGAGAGTTCAAGTGATGAGCAGACGCCTAGTCGGGATGATGATAGCCAGTCCAGGA  
GTCCAAGTAGATCTCGAAGTAAATCTGAAACCAATCAAGACACAGAACAAGGTCTGTCTCCTATAGTCACTCAA  
GAAGTCGATCGAGAAGTTCCACATCATCTTATCGATCAAGAAGCTACTCTAGAAGTCGGAGCAGAGGATGGTACA  
GCAGAGGCCGAACCAGAAGCCGGAGCAGTTCCCTACCGGAGTTACAAAAGTCACAGGACGTCCAGCAGGAGCAGAT  
CCAGGAGCAGCTCATATGATCCCCACAGTCGATCCAGGTCTACACCTACGATAGCTACTATAGCAGGAGTCCGA  
GTCGAAGTAGAAGCCAGAGAAGTGACAGTTACCACCGAGGCAGAAGTTATAATCGGCGGTCCAGGAGTTGTAGAT  
CTTATGGCTCTGACAGTGAAAGTGACCGAAGTTACTCTCATCACCGGAGCCCCAGTGAGAGCAGCAGATACAGTT  
GAAAACGTCCGGATACAAATTATATCTTATTTGTAAATATCTGGCAACTTAGCTTAAGAAATGTAATGACAGTCT  
GTTGTTCTATTTCAATATCAGAGGTGAATTTCAAAAATAGACACTTCTTAATTGTTACTGGTTTCATTTACATGTG  
GGGAGAAGAATTTAAAATACAGATATGTCTCCTAAAAATATTTTTATGCCACATTTTACAGTAGCCAATATGGA  
AATGAATTTTCATTTCTTGAATCAAGAAATCGTGAAATTTATCTATGTATAATTTGCAATATTATTTTAAAGTCTA  
TTTCACTCTATCTTACGTATCCCTTAGAATACAGATTCTTTTTGCCTGTTTTTCCAGTTTTAGCATATATGCTGC  
CAAGCATAGAAGTGTGAAGGAGAAGTGTAAAGGCGGCCAAATATTTATATACTGATTACATAGAGTCTTGTACA  
TATGTGCTCTAAAAACAAACCACCCAGAATTGATACTGTTGGTAACCAGGAGTATAAGGCAGTGGCTCTGGGGTT  
CTTAATTCATTCTTAACCTCTTTTGATACTTCACAGGATTAGGAAAAGTGGTCATCATAACATCCACACAGTCTGTA  
TTACTTCAGGCTTGTGGGCAAGGTTAGGAAGAATCAATCAGCCTTAACCTATAAATACCTGCACTGTCTCTGAGGA  
CTTACTATTTTATGTTCTTTTTAATCAATACCGATCAGAAGTTTAGGTTATAAAAAACAATTCTACTTTCATGCTTT  
GGTGCTTGGTAATTTTTGGTGCGTCTTTAAGCATTACTCTTATATATCATATATTAAAAATACCATAAAAAATGAAA  
TTCAGACAAAATCACTGGCACCAAAAATGGTTTTATTCTGAGCTGTCTTCACCTTGACTATTTGGGGGGCTTCTCT  
CAAGTACAGATGTGGGTTGGGGTCCCCGAGCAGGCAGGATTGGCAGTAAGAGATATTGGCCACTCAAGTCTAC  
TGTGTGTGTGTGCTCTGGAAGAGTGAAGAATGGACTTCAAAAGTAACATCAAAAATCTAACTGCCACCATCCTG  
GAGACATTTTGCAGGGCTTTCCCTTCAAGTCTTTCAAGTACAGGATATTACCACAACAGCAGCTGAAGTGTGTA  
ACCAGCATGTTTTTCCATTTCCACTGTGACCTGCAGCTGACTCAAAGCCTTGCGTGACCTGACCCAGGTGCAAG  
AGACAGGGGAAGAGGGATAGAGGGTATAGCATAAATTACATATTTTCATGGCTTTGGGTGGTTCCCTCAAAAATA  
ATTGGACCTGTAAAAACTAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGGTTTTTTTTTTTAAATCTTTAC  
TTTGAATTTGTTCCCCAAGTGTACTTAATCACCTTAGTGCCAGTTTAAATCCAGTTATGCAGAAGAAATTCATATT  
GGTTGCCTGATGTAGAGCTCAGCACCCCTACCACAGGCCTTGTCTGGTGTATTGGGAAGTGGAAGAGAGCCC  
TCAGTTGGAGGGAGCTGACAACCTTGGTGGAGGGAGGGTGCCCTTGAATGTATTAAACTATCACCCAAAGAAG  
GTATGAAAACAGGGTAAGGTGGTCAGTTGTTTGCCAGGTCAATAGACAGAAAGTACATTAGAAAACAGGACTTAG  
GCCAAACAACAATACTGGATACTGAATACAAAACAGTATGATTTATATTAAAGGTTTCCAAAGGTTGCCTGCAA  
AGGAGAATATTACTACTAGTCAGCAGGAAAAAAATGCATTGAGAACCCAAGCAGAAACTGCCAAATGTAATTAGG  
TTAAGAAAAGTTACCCTTGGGCAGTGTATTAGTTTTCTATTGCTGTGTGACAAATTACCCCAAATTTAGCAGTTT  
AAAAACAATACCCATAGCAGTTCTGTAGCTCATGAGTCTGGCACAGTGTGGCTGGATTCTCTGCTCAGGGTCTT  
AAAGGCTGAAATAAGGGTTGGCAGGACAACATTCCTTCATGGAGGCTCTGGGGAAGAATCTGCTTCTAAGTTCAI  
TCAGGTTGTTGGCGGAATTCAGTTCTTTGCTGGCTCTCAGCTGGAGGCCCTCTCTCACCTCAAGGCTGCCTGCA  
TTCCTTCTTATGTGGTCCCCCTCCAGCTTCAAACCAGCCTTCCTGCTCTTTCTCATGCTTCATATCTCTCTCCCGT  
CCTCCTGTTTTAGGGGCATATGATTAGCTCAAGCCCACAGATATATTTTAAAGGTTGATTGTGCGATAGAACATAA  
TTGCAGGAGTACTGTCTCATCTCATATATTCACGGGTTCTGGAGATTAGCTCATTGAAAGTGGGAGGGGCATTT  
TCAAATTCCTGCCTACCACAGGCAATAACTGCCCATCTCAGCTGTAGGTGGAATTTTTACCCAGAAAAGATAGGCC  
CTAGAAGCCTCATTTCTTTTCTCCATGGAAAAGGACAGCCCTCTGCTGCAGCGTTCAACTGTGTGTTTACTGAC  
AGAGTGAAGTACAGAAATAGCTTTTCTTCTAAGGGGATTGTTCTACATTTTGAAGTTATTTTTTAATAAAATT  
GAATTATGTTGT



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**FIGURE 496**

MGAQDRPQCHFDIEINREPVGRIMFQLFSDICPKTCKNFLCLCSGEKGLGKTTGKKLCYKGSTFHRVVKNFMIQG  
GDFSENGKGGESIYGGYFKDENFILKHDRAFLLSMANRGKHTNGSQFFITTKPAPHLDGVHVVFGLVISGFEVI  
EQIENLKTDAASRPYADVVIDCGVLATKSIKDVFEKKRKKPTHSEGSDSSSNSSSSSESSSESELEHERSRRRK  
HKRRPKVKRSKKRRKEASSSEEPNKHAMNPKGHSESRSDTNEKRSVDSSAKREKPVVRPEEIPFPENRFLLRD  
MPVVTAEEPEPKIPDVAPIVSDQKPSVSKSGRKIKGRGTIRYHTPPRSRSCSESDDDDSSETPPHWKEEMQRLRAY  
RPPSGEKWSKGDKLSDPCSSRWDERSLSQRSRSWSYNGYYSDLSTARHSGHHKKRRKEKKVKHKKKGKKQKHCR  
HKQTKKRILIPSDIESSKSSTRMKSSCDRESRSSSSLSHHSSKRDWSKSDKDVSLSLTHSSRDSYRSKSHS  
QSYSRGSSRSRTASKSSSHSRSRSKSRSSSKSGHRKRASKSPRKTAQLSENKPVKTEPLRATMAQENNVVQPV  
VAENIPVIPLSDSPPPSRWKPGQKPWKPSYERIQEMKAKTTHLLPIQSTYSLANIKETGSSSSYHKREKNSESDQ  
STYSKYSDRSSESSPRSRSRSSRSRSYSRSYTRSRSLASSHSRSPSSSRSHSRNKYSDHSQC SRSSSYTSISSD  
DGRRAKRRRLRSSGKKNSVSHKKHSSSEKTLHSKYVKGRDRSSCVRKYSESRSLLDYSSDSEQSSVQATQSAQEK  
EKQGQMERTHNKQEKNRGEEKSKSERECPHSKKRTLKENLSDH LRNGSKPKRKNYAGSKWDSESNSE RDVTKNK  
NDSHPSSDKEEGEATSDSESEVSEIHIKVKPTTKSSTNTSLPDDNGAWKSSKQRTSTSDSEGSCSNSENNRGKPQ  
KHHHGSKENL KREHTKKVKEKLKGKKDKKHKAPKRKQAFHWQPPLEFGEEEEEEIDDKQVTQESKEKKVSENNET  
IKDNILKTEKSSEEDLSGKHDTVTVSSDLQFTKDDSKLSISPTALNTEENVACLQNIQHVEESVPNGVEDVLQT  
DDNMEICTPDRSSPAKVEETSPLGNARLDTPDINIVLKQDMATEHPQAEVVKQESSMSSESKVLGEVKGQDSSSAS  
LASAGESTGKKEVAEKSQINLIDKKWKPLQGVGNLAAPNAATSSAVEVKVLTTVPPEMKPQGLRIEIKSKNKVRPG  
SLFDEVKRTARLNRPRNQESSSDEQTPSRDDDSQSRSPSRSRSKSETKSRHRTRSVSYSHSRSRSRSTSSYRS  
RSYSRSRSGWYSRGRTRSRSSSYRSYKSHRTSSSRSRSRSSSYDPHSRSRSYTYDSYYSRSRSRSRQRSDSYHR  
GRSYNRRSRSCRSYGSDSESDRSYSHHRSPSESSRY S

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**FIGURE 497A**

CGGCAGGGTTGGAAAATGATGGAAGAGGCGGAGGTGGAGGCGACCGAGTGCTGAGAGGAACCTGCGGAATCGGCC  
GAGATG~~GGG~~GTCTGGCGCGCGCTTTCCCTCGGGGACCCCTTCGTGTCCGGTGGTTGCTGTTGCTTGGCCTGGTGGGC  
CCAGTCCTCGGTGCGGCGCGGCCAGGCTTTCAACAGACCTCACATCTTTCTTCTTATGAAATTATAACTCCTTGG  
AGATTAAC TAGAGAAAGAAGAGAAGCCCCTAGGCCCTATTCAAACAAGTATCTTATGTTATT CAGGCTGAAGGA  
AAAGAGCATATTATTCACTTGGAAAGGAACAAAGACCTTTTGCCTGAAGATTTTGTGGTTTATACTTACAACAAG  
GAAGGGACTTTAATCACTGACCATCCCAATATACAGAATCATTGTCATTATCGGGGCTATGTGGAGGGAGTTCAT  
AATTCATCCATTGCTCTTAGCGACTGTTTTGGACTCAGAGGATTGCTGCATTTAGAGAATGCGAGTTATGGGATT  
GAACCCCTGCAGAACAGCTCTCATTTTGGACACATCATTTATCGAATGGATGATGTCTACAAAGAGCCTCTGAAA  
TGTGGAGTTTCCAACAAGGATATAGAGAAAGAACTGCAAAGGATGAAGAGGAAGAGCCTCCAGCATGACTCAG  
CTACTTCGAAGAAGAAGAGCTGTCTTGCCACAGACCCGGTATGTGGAGCTGTTTCATTGTCTAGACAAGGAAAGG  
TATGACATGATGGGAAGAAATCAGACTGCTGTGAGAGAAGAGATGATTCTCCTGGCAAAC TACTTGGATAGTATG  
TATATTATGTTAAATATTTCGAATTGTGCTAGTTGGACTGGAGATTTGGACCAATGGAAACCTGATCAACATAGTT  
GGGGGTGCTGGTGATGTGCTGGGGAACCTTCGTGCAGTGGCGGGAAAAGTTTCTTATCACACGTCGGAGACATGAC  
AGTGCACAGCTAGTTCTAAAGAAAGGTTTTGGTGGAACTGCAGGAATGGCATTGTGGGAACAGTGTGTTCAAGG  
AGCCACGCAGGCGGGATTAATGTGTTTGGACAAATCACTGTGGAGACATTTGCTTCCATTGTTGCTCATGAATTG  
GGTCATAATCTTGGAAATGAATCACGATGATGGGAGAGATTGTTCTGTGGAGCAAAGAGCTGCATCATGAATTCA  
GGAGCATCGGGTTCCAGAAACTTTAGCAGTTGCAGTGCAGAGGACTTTGAGAAGTTAACTTTAAATAAAGGAGGA  
AACTGCCTTCTTAATATTCCAAAGCCTGATGAAGCCTATAGTGCTCCCTCCTGTGGTAATAAGTTGGTGGACGCT  
GGGGAAGAGTGTGACTGTGGTACTCCAAAGGAATGTGAATTGGACCCTTGCTGCGAAGGAAGTACCTGTAAGCTT  
AAATCATTTGCTGAGTGTGCATATGGTGACTGTTGTAAAGACTGTCGGTTCCTTCCAGGAGGTACTTTATGCCGA  
GGAAAAACCAGTGAGTGTGATGTTCCAGAGTACTGCAATGGTTCTTCTCAGTTCTGTGTCAGCCAGATGTTTTTATT  
CAGAATGGATATCCTTGCCAGAATAACAAAGCCTATTGCTACAACGGCATGTGCCAGTATTATGATGCTCAATGT  
CAAGTCATCTTTGGCTCAAAAGCCAAGGCTGCCCCCAAAGATTGTTTCATTGAAGTGAATTCTAAAGGTGACAGA  
TTTGGCAATTGTGGTTTTCTCTGGCAATGAATACAAGAAGTGTGCCACTGGGAATGCTTTGTGTGGAAAGCTTCAG  
TGTGAGAATGTACAAGAGATACCTGTATTTGGAATTGTGCTGCTATTATTCAAACGCCTAGTCGAGGCACCAA  
TGTTGGGGTGTGGATTTCCAGCTAGGATCAGATGTTCCAGATCCTGGGATGGTTAACGAAGGCACAAAATGTGGT  
GCTGGAAAGATCTGTAGAACTTCCAGTGTGTAGATGCTTCTGTTCTGAATTATGACTGTGATGTTTCAGAAAAAG  
TGTCATGGACATGGGGTATGTAATAGCAATAAGAATTGTCACTGTGAAAATGGCTGGGCTCCCCCAAATTGTGAG  
ACTAAAGGATACGGAGGAAGTGTGGACAGTGGACCTACATACAATGAAATGAATACTGCATTGAGGGACGGACTT  
CTGGTCTTCTTCTTCTTAATTGTTCCCTTATTGTCTGTGCTATTTTTATCTTCATCAAGAGGGATCAACTGTGG  
AGAAGCTACTTCAGAAAGAAGAGATCACAAACATATGAGTCAGATGGCAAAAATCAAGCAAACCTTCTAGACAG  
CCGGGGAGTGTTCCTCGACATGTTTCTCCAGTGACACCTCCAGAGAAGTTCCTATATATGCAAACAGATTTGCA  
GTACCAACCTATGCAGCCAAGCAACCTCAGCAGTTCCCATCAAGGCCACCTCCACCACAACCGAAAGTATCATCT  
CAGGGAAACTTAATTCCTGCCCCTCCTGCTCCTGCACCTCCTTTATATAGTTCCCTCACTTGATTTTTTTAACTT  
TCTTTTTGCAAAATGCTTTCAGGGAACCTGAGCTAATACTTTTTTTTTTCTTGATGTTTTCTTGAAAAGCCTTTCT  
GTTGCAACTATGAATGAAAACAAAACACCACAAAACAGACTTCACTAACACAGAAAAACAGAACTGAGTGTGAG  
AGTTGTGAAATACAAGGAAATGCAGTAAAGCCAGGGAATTTACAATAACATTTCCGTTTCCATCATTGAATAAGT  
CTTATTTCAGTCATCGGTGAGGTAAATGCACTAATCATGGATTTTTTGAACATGTTATTGCAGTGATTCTCAAATT  
AACTGTATTGGTGTAAGATTTTGTGCTTAAGTGTTTAAGTGTATTCTGAATTTTCTACCTTAGTTATCATTAA  
TG TAGTTCCCTCATTGAACATGTGATAATCTAATACCTGTGAAAAC TACTAATCAGCTGCCAATAATATCTAATA  
TTTTTCATCATGCACGAATTAATAATCATCATACTCTAGAATCTTGTCTGTCACTCACTACATGAATAAGCAAAT  
ATTGTCTTCAAAGAATGCACAAGAACCACAATTAAGATGTCATATTATTTTGAAAGTACAAAATATACTAAAAG  
AGTGTGTGTGATTTCACGCAGTTACTCGCTTCCATTTTTATGACCTTTCAACTATAGGTAATAACTCTTAGAGAA  
ATTAATTTAATATTAGAATTTCTATTATGAATCATGTGAAAGCATGACATTCGTTACAAATAGCACTATTTTAA  
TAAATTATAAGCTTTAAGGTACGAAGTATTTAATAGATCTAATCAAATATGTTGATTTCATGGCTATAATAAGCA  
GGAGCAATTATAAAATCTTCAATCAATTGAACTTTTACAAAACCACTGAGAAATTCATGAGCACTTTAAATCT  
GAACTTTCAAAGCTTGCTATTAAATCATTTAGAATGTTTACATTTACTAAGGTGTGCTGGGTCATGTAAAATATT  
AGACACTAATATTTTCATAGAAATTAGGCTGGAGAAAGAAGGAAGAAATGGTTTTCTTAAATACCTACAAAAAG

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**FIGURE 497B**

TTACTGTGGTATCTATGAGTTATCATCTTAGCTGTGTTAAAAATGAATTTTTACTATGGCAGATATGGTATGGAT  
CGTAAAAATTTTAAGCACTAAAAATTTTTTCATAACCTTTCATAATAAAGTTTAATAATAGGTTTATTAAGTGAAT  
TTCATTAGTTTTTTAAAAGTGTTTTTGGTTTGTGTATATATACATATACAAATACAACATTTACAATAAATAAAA  
TACTTGAAATTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 498**

MSGARFPSGTLRVRWLLLLGLVGPVLGAARPGFQQTSHLSSYEIITPWRLTRERREAPRPYSKQVSYVIAEGK  
EHIIHLERNKDLLPEDFVVYTYNKEGTLITDHPNIQNHCHYRGYVEGVHNSSIALSDCFGLRGLLHLENASYGIE  
PLQNSSHFEHIIYRMDDVYKEPLKCGVSNKDIEKETAKDEEEPPSMTQLLRRRRRAVLPQTRYVELFIVVDKERY  
DMMGRNQTAVREEMILLANYLDSMYIMLNIRIVLVGLEIWTNGNLINIVGGAGDVLGNFVQWREKFLITRRRHDS  
AQLVLKKGFGGTAGMAFVGTVCSSRHAGGINVFGQITVETFASIVAHELGHNLGMNHDDGRDCSCGAKSCIMNSG  
ASGSRNFSSCSAEDFEKLTLNKGGNCLLNIPKPDEAYSAPSCGNKLVDAGEECDGTPKECELDPCCEGSTCKLK  
SFAECAYGDCCKDCRFLPGGTLCRGKTSECDVPEYCNSSQFCQPDVFIQNGYPCQNNKAYCYNGMCQYYDAQCQ  
VIFGSKAKAAPKDCFIEVNSKGDRFGNCGFSGNEYKKCATGNALCGKLQCENVQEIPVFGIVPAIIQTPSRGTKC  
WGVDFQLGSDVPDPGMVNEGKCGAGKICRNFQCVDA SVLN YDCDVQKKCHGHGVCNSNKNCHCENGWAPPNCET  
KGYGGSVDSGPTYNEMNTALRDGLLVFFFLIVPLIVCAIFIFIKRDQLWRSYFRKKRSQTYESDGKNQANPSRQP  
GSVPRHVSPVTPPREVPIYANRFAVPTYAAKQPQQFPSRPPPPQPKVSSQGNLIPARPAPAPPLYSSLT

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**FIGURE 499**

CGTCCGTGACAAG**ATGA**AGCTCATCATCCTGGAGCACTATTCTCAGGCGAGCGAGTGGGCGGGCTAAATACATCAG  
GAACCGTATCATCCAGTTTAAACCCAGGGCCAGAGAAGTACTTCACCCTGGGGCTCCCCACTGGGAGTACCCCACT  
TGGCTGCTACAAGAAGCTGATTGAATACTATAAGAATGGGGACCTGTCCTTTAAATATGTGAAGACCTTCAACAT  
GGATGAGTACGTGGGCCTTTCCTCGAGACCACCCGGAGAGTTACCACTCCTTCATGTGGAACAACCTTCTTCAAGCA  
CATTGACATCCACCCAGAAAACACCCACATTCTGGATGGGAATGCAGTCGACCTACAGGCAGAATGTGATGCCTT  
TGAAGAGAAGATCAAGGCTGCAGGTGGGATCGAGCTATTTGTTGGAGGCATCGGCCCTGATGGACACATTGCCTT  
CAACGAGCCAGGCTCCAGTCTGGTGTCCAGGACCCGTGTGAAGACGCTGGCCATGGATAACCATCCTGGCCAATGC  
TAGGTTCTTCGATGGAGAACTCACCAGGTGCCACCATGGCCTTGACGGTGGGGGTGGGCACTGTCATGGATGC  
TAGAGAGGTGATGATCCTTATCACAGGTGCTCACAAGGCATTTGCTCTGTACAAGGCCATCGAGGAGGGAGTGAA  
CCACATGTGGACCGTGTCTGCCTTCCAGCAGCATCCCCGCACCGTGTGTTGTGTGTGACGAGGATGCCACCTTGGA  
GCTGAAAGTGAAGACTGTCAAGTATTTCAAAGGTTTAATGCTTGTTTCATAACAAGTTGGTGGACCCCTTGTACAG  
TATCAAAGAGAAAGAACTGAGAAAAGCCAATCTTCGAAGAAACCATAACAGCGAT**TAG**CCTGTGCTGGGACCTAG  
TGTCAGTACCCATAGGGAAAGGCAGGTCTTTCTGGAAATTGTCTTTAGAAGAAAGAATTGTATTTCTTTAATCT  
AGTATGGTTACTCCAGATAAGTGGGTGAACCTTATTGTTCTTGGCCATGAGGCTGGGAGCCTAGTCACGGAGTTTAA  
GCTATAGGGAGAATGTTTGTAACCTTAATCAGAAAAAAATATCTGCAAAATGTACTCCATCATTTTTGATGTCTGC  
CAAACCCAGGTTGGGAGTTTTAACTTTTTGTTCTGCTTCAGCCATGGTTTACACATATGACACACTCCCGTCAG  
GAATTTCTCTCCTTACACGCACTGATTTTCAAGTGGGAGGGGAATTAGGGGGCTTATGTATATTGGATAACCACCTCT  
TGAGAGTCCTTCTTGACAGGCCTGCCCCCTTGGTTGAGAACCATTGTTCCAAGTGAAGGCACAAACTCTCAATAT  
CTAAAATAAGTGCAAGGAAGCAGTCTCTTTGGTCAGTAACAAGTGCAATGGAAAGAAAACGATCCCTTCCCTTCTT  
CCACTTTCACAGCTTTTCTCTGAACTAGGAGAACCTGGGGGTGGATTTGGGTGGGTGGGGCCAAAGAGGAGGCTT  
CTATTGATAAAATCCAGAGCCTCAAGGGGCCAGCCACGTCAAACCTTCTCTCCCTCAGGGACTCTCCAGCACCAAA  
AGGCAGAAGGTGGAAGCCGTTTTTCCCCCAGAGCCCTGTGTTTTTGTGAAAGGCCTCACTGTGGCTCCTCTGTTT  
TACATACTCATTAGTAAGTGGGAGGTCCACTGGGGCAACAGACACTGCCACAATTTAGTGTTGTGTTTACGCCAA  
GGGGACGGTCTGGACAGGCAGCTTAAGTGTGAGTTTAGTCACAACCTCCTGAGTGTCCCGCTCTCCTGCTTACCTA  
GGAGGTGAGTGCCAGGAAAATACACCAAATGCTTCTAGTATTGTTTCCCCACTTAAATAGTCCTGCTTAAATTC  
ACATGGTGTGGTCTGATGTTCTGAGAGCATCAGGAAATACAACCCTTTTGCCCATTTACCTTCTCCCCGGATCC  
CAAGGTGGTCTGTTGCTCTGGCTTCCTTTTATTGTTCTTAGGCCCTCATGGAGTGGATGCTGCCTCCTCCTGGCTG  
TTTTTGTGCTGTTTGAAGCTACTGCTGCCTCCATTTCTGGGAAAGACCTTTGAGAGCCTAGCCCAGGCCTAAGG  
GCTATGTTTGGTACCAGTGTTTTGTCTTTAGCTTTTCTATGTGATTGTGCCGTCATTCTGTTTTAAGCTCATGGA  
TCAATGGATTTGTTTACAATGTGATATTTTCTATTAAATCCAGTATTTTCAAAAAAAAAAAAAA

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**FIGURE 500**

MKLIILEHYSQASEWAAKYIRNRRIIQFNPGPEKYFTLGLPTGSTPLGCKKLI EYYKNGDLSFKYVKTFNMDEYV  
GLPRDHPESYHSFMWNNFFKHIDHPENTHILDGNAVDLQAECDAFEKIKAAAGGIELFVGGIGPDGHIAFNEPG  
SSLVSRTRVKTLAMDITILANARFFDGELTKVPTMALTVGVGTVMDAREVMILITGAHKAFALYKAIEEGVNHMWT  
VSAFQQHPRTVFVCDDEATLELKVKTVKYFKGLMLVHNKLVDPLYSIKEKETESQSSKKPYSD

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**FIGURE 501**

AAAACAGCCGGGGCTCCAGCGGGAGAACGATAATGCAAAGTGCTATGTTCTTGGCTGTTCAACACGACTGCAGAC  
CCATGGACAAGAGCGCAGGCAGTGGCCACAAGAGCGAGGAGAAGCGAGAAAAGATGAAACGGACCCCTTTTAAAAG  
ATTGGAAGACCCGTTTGAGCTACTTCTTACAAAATTCCTCTACTCCTGGGAAGCCCCAAAACCGGCAAAAAAAGCA  
AACAGCAAGCTTTTCATCAAGCCTTCTCCTGAGGAAGCACAGCTGTGGTCAGAAGCATTGACGAGCTGCTAGCCA  
GCAATATGGTCTTGCTGCATTTCAGGGCTTTTTTAAAGTCGGAATTCTGTGAAGAAAATATTGAATTCTGGCTGG  
CCTGTGAAGACTTCAAAAAACCAAATCACCCCAAAAGCTGTCCTCAAAGCAAGGAAAATATATACTGACTTCA  
TAGAAAAGGAAGCTCCAAAAGAGATAAACATAGATTTTCAAACCAAACTCTGATTGCCCAGAATATACAAGAAG  
CTACAAGTGGCTGCTTTACAACCTGCCCAGAAAAGGGTATACAGCTTGATGGAGAACAACCTTTATCCTCGTTTCT  
TGGAGTCAGAATTCTACCAGGACTTGTGTAAAAAGCCACAAATCACACAGAGCCTCATGCTACATGAAATGTAA  
AAGGGAGCCCAGAAATGGAGGACATTTCAATCTTTTTCTGAGGGGAAGGACTGTGACCTGCCATAAAGACTGAC  
CTTGAATTCAGCCTGGGTGTTTCAGGAAACATCACTCAGAACTATTGATTCAAAGTTGGGTAGTGAATCAGGAAGC  
CAGTAACTGACTAGGAGAAGCTGGTATCAGAACAGCTTCCCTCACTGTGTACAGAACGCAAGAAGGGAATAGGTG  
GTCTGAACGTGGTGTCTCACTCTGAAAAGCAGGAATGTAAGATGATGAAAGAGACAATGTAATACTGTTGGTCCA  
AAAGCATTTAAAATCAATAGATCTGGGATTATGTGGCCTTAGGTAGCTGGTTGTACATCTTCCCTAAATCGATC  
CATGTTACCACATAGTAGTTTTAGTTTAGGATTCAGTAACAGTGAAGTGTTTACTATGTGCAAGGGTATTGAAGT  
TCTTATGACCACAGATCATCAGTACTGTTGTCTCATGTAATGCTAAAACTGAAATGGTCCGTGTTTGCATTGTTA  
AAAAATGATGTGTGAAATAGAATGAGTGCTATGGTGTTGAAAACCTGCAGTGTCGTTATGAGTGCCAAAAATCTGT  
CTTGAAGGCAGCTACACTTTGAAGTGGTCTTTGAATACTTTTAAATAATTTATTTTGATAAATAATATTG

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**FIGURE 502**

MQSAMFLAVQHDCRPMDKSAGSGHKSEEKREKMKRTLLKDWKTRLSYFLQNSSTPGKPKTGKKSKQQAFIKPSPE  
EAQLWSEAFDELLASKYGLAAFRAFLKSEFCEENIEFWLACEDFKKTKSPQKLSSKARKIYTDFIEKEAPKEINI  
DFQTKTLIAQNIQEATSGCFTTAQKRVYSLMENNSYPRFLESEFYQDLCKKPQITTEPHAT



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**FIGURE 503**

CAGACGGCGCTGAGCGCGGCGGGCGGGAGCGGCGTTCGAGTGTCTCCGTGCGCCCGTCTGTGGCCAAGCAGCCA  
GCAGCCTAGCAGCCAGTCAGCTTGCCGCGCGGCGGCCAAGCAGCCAACCATGCTCAACTTCGGTGCCTCTCTCCAG  
CAGACTGCGGAGGAAAGAATGGAAATGATTTCTGAAAAGGCCAAAAGAGAGTATGTATTCTGGAACAAAACCTGCA  
GAGAAAAGTGATTTTGAAGCTGTAGAAGCACTTATGTCAATGAGCTGCAGTTGGAAGTCTGATTTTAAGAAATAC  
GTTGAAAACAGACCTGTTACACCAGTATCTGATTTGTCTAGAGGAAGAGAATCTGCTTCCGGGAACACCTGATTTT  
CATACAATCCCAGCATTTTGTGTTGACTCCACCTTACAGTCTTCTGACTTTGAACCTCTCAAGTGTCAAATCTG  
ATGGCACCAGCGCCATCTACTGTACACTTCAAGTCACTCTCAGATACTGCCAAACCTCACATTGCCGCACCTTTC  
AAAGAGGAAGAAAAGAGCCAGTATCTGCCCCAACTCCCCAAAGCTCAGGCAACAAGTGTGATTCGTGCATACA  
GCTGATGCCCAGCTATGTAACCACCAGACCTGCCCAATGAAAGCAGCCAGCATCCTCAACTATCAGAACAATTCT  
TTTAGAAGAAGAACCACCTAAATGTTGAGGCTGCAAGAAAAGAACATACCATGTGCCGCTGTGTACCAAACAGA  
TCCAAATGTGAGAGAAACACAGTGGCAGATGTTGATGAGAAAGCAAGTGTGCACTTTATGACTTTTCTGTGCCT  
TCCTCAGAGACGGTCATCTGCAGGTCTCAGCCAGCCCCTGTGTCCCCACAACAGAAGTCAGTGTGGTCTCTCCA  
CCTGCAGTATCTGCAGGGGGAGTGCCACCTATGCCGGTCATCTGCCAGATGGTTCCCTTCTGCCAACAAACCTT  
GTTGTGACAACAGTCGTTCCCAGCACTCTCTCCAGCCAGCCACCAGCCGTTTGGCCCCCTGTTGTGTTTCATGGGC  
ACACAAGTCCCCAAAGGCGCTGTCTGTTTGTGGTACCCAGCCCGTTGTGCAGAGTTCAAAGCCTCCGGTGGTG  
AGCCCGAATGGCACCAGACTCTCTCCATTGCCCTGCTCCTGGGTTTTCCCTTTCAGCAGCAAAAAGTCACTCCT  
CAGATTGATTCATCAAGGATAAGGAGTCACATCTGTAGCCACCAGGATGTGGCAAGACATACTTTAAAGTTCC  
CATCTGAAGGCCACACGAGGACGCACACAGGAGAAAAAGCCTTTCAGCTGTAGCTGGAAAGGTTGTGAAAGGAGG  
TTTGCCCGTTCTGATGAAGTGTCCAGACACAGGCGAACCCACACGGGTGAGAAGAAATTTGCGTGCCCCATGTGT  
GACCGGCGGTTTCATGAGGAGTGACCATTTGACCAAGCATGCCGCGGCCATCTATCAGCCAAGAAGCTACCAAAC  
TGGCAGATGGAAGTGAGCAAGCTAAATGACATTGCTCTACCTCCAACCCCTGCTCCACACAGTGAACAGACCGGA  
AAGTGAAGAGTCAGAATAACTTTGGTCTCAGCGGGAGCCAGTGGTGTATGTAATAATGCTTCCACTGCAAGTCTG  
TGGCCCCACAACGTGGGCTTAAAGCAGAAGCCCCACAGCCTGGCACGAAGGCCCGCCTGGGTTAGGTGACTAAA  
AGGGCTTCGGCCACAGGCAGGTACAGAAAGGCAGGTTTCATTTCTTATCACATAAGAGAGATGAGAAAGCTTTT  
ATTCTTTTGAATATTTTTTGAAGGTTTCAGATGAGGTCAACACAGGTAGCACAGATTTTGAATCTGTGTGCATAT  
TTGTTACTTTACTTTTGTGTTTATACTTGAGACCAACTTTTCAATGTGATTCTTCTAAAGCACTGGTTTCAAGA  
ATATGGAGGCTGGAAGGAAATAAACATTACGGTACAGACATGGAGATGTAAATGAGTTTGTATTATTACAAATA  
TTGTCATCTTTTCTAGAGTTATCTTCTTTATTATTCTAGTCTTTCCAGTCAACATCGTGGATGTAGTGATTAA  
ATATATCTAGAACTATCATTTTTTACACTATTGTGAATATTTGGAATTGAACGACTGTATATTGCTAAGAGGGCCC  
AAAGAATTGGAATCCTCCTTAATTTAATTGCTTTGAAGCATAGCTACAATTTGTTTTTGCATTTTTTGTGTTGAAA  
GTTTAACAAAATGACTGTATCTAGGCATTTTATTATGCTTTGAACCTTTAGTTTGCCTGCAGTTTCTTGTGTAGATT  
TGAAAATTGTATACCAATGTGTTTTCTGTAGACTCTAAGATACACTGCACTTTGTTTAGAAAAAACTGAAGAT  
GAAATATATATTGTAAAGAAGGGATATTAAGAATCTTAGATAACTTCTTGAAAAAGATGGCTTATGTCATCAGTA  
AAGTACCTTTATGTTATGAGGATATAATGTGTGCTTTATTGAATTAGAAAATTAGTGACCATTATTACAGGTGG  
ACAAATGTTGTCTGTTAATTTATAGGAGTTTTTTGGGGATGTGGAGGTAGTTGGGTAGAAAAATTATTAGAACA  
TTCATTTTGTAAACAGTATTTCTCTTTTATTCTGTTATATAGTGGATGATATACACAGTGGCAAAACAAAAGTA  
CATTGCTTAAATATATAGTGAAAAATGTCACTATATCTTCCCATTTAACATTGTTTTTGTATATTGGGTGTAGA  
TTTCTGACATCAAACTTGACCCCTTGAAAAACAAAAGTTTTTAATTAAAAAAATCCTTGTGACTTACAATTTGC  
ACAATATTTCTTTTGTGTTGACTTTATATCTTGTGTTTACAATAAAGAATTC

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**FIGURE 504**

MLNFGASLQQTAEERMEMISERPKE SMYSWNKTAEKSDFEAVEALMSMSCSWKSDFKKYVENRPVTPVSDLSEEE  
NLLPGTPDFHTIPAFCLTPPYSPSDFEPSQVSNLMA PAPSTVHFKSLSDTAKPHIAAPFKEEEKSEV SAPKLPKA  
QATSVIRHTADAQLCNHQTCPMKAASILNYQNNSFRRRTHLNVEAARKNIPCAAVSPNRSKCERN TVADVDEKAS  
AALYDFSVPSSSETVICRSQPAPVSPQQKSVLVSPFAVSAGGVPPMPVICQMVPLPANNPVVTTVVPSTPPSQPPA  
VCPFVVFMTQVPKGAVMFVVPQPVVQSSKPPVSENGTRLSP IAPAPGFSPSAKVTPQIDSSRIRSHICSHPG  
CGKTYFKSSHLKAHTRTHTGEKPFSCSWKGCERRFARSDEL SRHRRTHTGEKKFACPMCDRRFMRS DHLT KHARR  
HLSAKKLPNWQMEVSKLNDIALPPTPAPTQ

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**FIGURE 505**

GGGACAGCGGGCAGGGAAAGCCGCGGGAAGGGTACTCCAGGCGAGAGGCGGACGCGAGTCGTCGTGGCAGGAAAA  
GTGACTAGCTCCCCTTCGTTGTCAGCCAGGGACGAGAACACAGCCACGCTCCCACCCGGCTGCCAACGATCCCTC  
GGCGGCGGATGTCGGCCGCGCGGTGCCCCGAGGCCTGCGGGCCACCTACCACCGGCTCCTCGATAAAGTGGAGCTGAT  
GCTGCCCCGAGAAATTGAGGCCGTTGTACAACCATCCAGCAGGTCCCAGAACAGTTTTCTTCTGGGCTCCAATTAT  
GAAATGGGGGTTGGTGTGTGCTGGATTGGCTGATATGGCCAGACCTGCAGAAAACTTAGCACAGCTCAATCTGC  
TGTTTTGATGGCTACAGGGTTTATTTGGTCAAGATACTCACTTGTAATTATTCCAAAAAATTGGAGTCTGTTTGC  
TGTTAATTTCTTTGTGGGGGCAGCAGGAGCCTCTCAGCTTTTTTCGTATTTGGAGATATAACCAAGAACTAAAGC  
TAAAGCACACAAATAAAAGAGTTCCTGATCACCTGAACAATCTAGATGTGGACAAAACCATTTGGGACCTAGTTTA  
TTATTTGTTATTGATAAAGCAAAGCTAACTGTGTGTTTAGAAGGCACTGTAAGGAACTTATCTATGGATATTAGTAAC  
ATAGAAAAATGCAGCAAACTTTTAATAACAGTCTCTCTACATGACTTAAGGAACTTATCTATGGATATTAGTAAC  
ATTTTCTACCATTTGTCCGTAATAAACCATACTTGCTCGTAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 506**

MSAAGARGLRATYHRLLDKVELMLPEKLRPLYNHPAGPRTVFFWAPIMKWGLVCAGLADMARPAEKLSTAQSAVL  
MATGFIWSRYSLVIIPKNWSLFAVNFFVGAAGASQLFRIWRYNQELKAKAHK

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**FIGURE 507**

ATGTGGGGCGACCTCTGGCTCCTCCCGCCTGCCTCTGCCAATCCGGGCACTGGGACAGAGGCTGAGTTTGAGAAA  
GCTGCAGAGGAGGTTAGGCACCTTAAGACCAAGCCATCGGATGAGGAGATGCTGTTTCATCTATGGCCACTACAAA  
CAAGCAACTGTGGGCGACATAAATACAGAACGGCCCCGGGATGTTGGACTTCACGGGCAAGGCCAAGTGGGATGCC  
TGGAATGAGCTGAAAGGGACTTCCAAGGAAGATGCCATGAAAGCTTACATCAACAAAGTAGAAGAGCTAAAGAAA  
AAATACGGGATATTGAGAGACTGGATTTGGTTACTGTGCCATGTGTTTATCCTAAACTGAGACAATGCCTTGTTTT  
TTTCTAATACCGTGGATGGTGGGAATTCGGGAAAATAACCAGTTAAACCAGCTACTCAAGGCTGCTCACCATACG  
GCTCTAACAGATTAGGGGCTAAAACGATTACTGACTTTCCTTGAGTAGTTTTTTATCTGAAATCAATTAAAAGTGT  
ATTTGTTACTTT

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**FIGURE 508**

MWGDIWLLPPASANPGTGTEAEFEKAAEEVRHLKTKPSDEEMLFIYGHYKQATVGDINTERPGMLDFTGKAKWDA  
WNELKGTSKEDAMKAYINKVEELKKKYGI

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**FIGURE 509A**

ACTCTGGAGTGGGAGTGGGAGCGAGCGCTTCTGCGACTCCAGTTGTGAGAGCCGCAAGGGCATGGGAATTGACGC  
CACTCACCGACCCCCAGTCTCAATCTCAACGCTGTGAGGAAACCTCGACTTTGCCAGGTCCCCAAGGGCAGCGGG  
GCTCGGCGAGCGAGGCACCCCTTCTCCGTCCCCATCCCAATCCAAGCGCTCCTGGCACTGACGACGCCAAGAGACT  
CGAGTGGGAGTTAAAGCTTCCAGTGAGGGCAGCAGGTGTCCAGGCCGGGCCTGCGGGTTTCTGTTGACGTCTTGC  
CCTAGGCAAAGGTCCCAGTTTCTTCTCGGAGCCGGCTGTCCCAGCCACTGGAAACCGCACCTCCCCGCAGC**ATG**

GGCACCAGCCTCAGCCCCAACGACCCTTGGCCGCTAAACCCGCTGTCCATCCAGCAGACCACGCTCCTGCTACTC  
CTGTGCGGTGCTGGCCACTGTGCATGTGGGCCAGCGGTGCTGAGGCAACGGAGGCGGCAGCTCCGGTCCGCGCCC  
CCGGGCCCCGTTTTCGTGGCCACTGATCGGAAACGCGCGCGGCGGTGGGCCAGGCGGCTCACCTCTCGTTCGCTCGC  
CTGGCGCGGCGCTACGGCGACGTTTTCCAGATCCGCTGGGCAGCTGCCCCATAGTGGTGCTGAATGGCGAGCGC  
GCCATCCACCAGGCCCTGGTGAGCAGGGCTCGGCCTTCGCCGACCGCGCGGCTTCGCCTCCTTCCGTGTGGTG  
TCCGGCGGCCGAGCATGGCTTTTCGGCCACTACTCGGAGCACTGGAAGGTGCAGCGGCGCGCAGCCACAGCATG  
ATGCGCAACTTCTTACGCGCCAGCCGCGCAGCCGCCAAGTCTCGAGGGCCACGTGCTGAGCGAGGCGCGCGAG  
CTGGTGGCGCTGCTGGTGCGCGGAGCGCGGACGGCGCCTTCTCGACCCGAGGCGGCTGACCGTCTGCGCCGTG  
GCCAACGTATGAGTGCCGTGTGTTTCGGCTGCCGCTACAGCCACGACGACCCCGAGTTCCGTGAGCTGCTCAGC  
CACAACGAAGAGTTTCGGGCGCAGGTGGGCGCGGGCAGCCTGGTGGACGTGATGCCCTGGCTGCAGTACTTCCCC  
AACCCGGTGCGCACCGTTTTTCGCGAATTCGAGCAGCTCAACCGCAACTTCAGCAACTTCATCTGACAAAGTTC  
TTGAGGCACTGCGAAAGCCTTCGGCCCGGGGCGGCCCCCGCGACATGATGGACGCCTTTATCTCTCTGCGGAA  
AAGAAGGCGGCCGGGACTCGCACGGTGGTGGCGCGCGGCTGGATTGGAGAAGTACCGGCCACTATCACTGAC  
ATCTTCGGCGCCAGCCAGGACACCCTGTCCACCGCGCTGCAGTGGCTGCTCCTCCTTTCACCAGGTATCCTGAT  
GTGCAGACTCGAGTGAGGCAGGAATTGGATCAGGTGCTGGGGAGGGACCGTCTGCCTTGTATGGGTGACCAGCCC  
AACCTGCCCTATGTCTGGCCTTCTTTATGAAGCCATGCGCTTCTCCAGCTTTGTGCCTGTCACTATTCTCAT  
GCCACCCTGCCAACACCTCTGTCTTGGGCTACCACATTCCCAAGGACACTGTGGTTTTTGTCAACCAGTGGTCT  
GTGAATCATGACCCAGTGAAGTGGCCTAACCCGGAGAACTTTGATCCAGCTCGATTCTTGGACAAGGATGGCCTC  
ATCAACAAGGACCTGACCAGCAGAGTGATGATTTTTTTCAGTGGGCAAAGGCGGTGCATTGGCGAAGAAGTCTCT  
AAGATGCAGCTTTTTCTCTTCACTCTCCATCCTGGCTCACCAGTGCGATTTTCAGGGCCAACCCAAATGAGCCTGCG  
AAAATGAATTTTCAGTTATGGTCTAACCATTAACCCAAAGTCATTTAAAGTCAATGTCACTCTCAGAGAGTCCATG  
GAGCTCCTTGATAGTGCTGTCCAAAATTTACAAGCCAAGGAACTTGCCAA**TAAGA**AGCAAGAGGCAAGCTGAAA  
TTTTAGAAATATTACATCTTCGGAGATGAGGAGTAAATTCAGTTTTTTTTTCCAGTTCTCTTTTGTGCTGCTTC  
TCAATTAGCGTTTAAGGTGAGCATAAATCAACTGTCCATCAGGTGAGGTGTGCTCCATACCCAGCGGTTCTTCAT  
GAGTAGTGGGCTATGCAGGAGCTTCTGGGAGATTTTTTGTAGTCAAAGACTTAAAGGGCCCAATGAATTATTATA  
TACATACTGCATCTTGTTATTTCTGAAGGTAGCATTCTTTGGAGTTAAATGCACATATAGACACATACACCCA  
AACACTTACACCAAATACTGAATGAAGAAGTATTTTGGTAACCAGGCCATTTTGGTGGGAATCCAAGATTGGT  
CTCCCATATGCAGAAATAGACAAAAAGTATATTAAACAAAGTTTCAGAGTATATTGTTGAAGAGACAGAGACAAG  
TAATTTTCAGTGTAAGTGTGTGATTGAAGGTGATAAGGGAAAAGATAAAGACCAGAAATCCCTTTTACCTTTT  
CAGGAAAATAACTTAGACTCTAGTATTTATGGGTGGATTTATCCTTTTGCCTTCTGGTATACTTCCTTACTTTTA  
AGGATAAATCATAAAGTCAGTTGCTCAAAAAGAAATCAATAGTTGAATTAGTGAGTATAGTGGGGTTCCATGAGT  
TATCATGAATTTTAAAGTATGCATTATTAATTTGTAAACTCCAAGGTGATGTTGTACCTCTTTTGTCTGCCAAA  
GTACAGAATTTGAATTATCAGCAAAGAAAAAAGCCAGCCAAGCTTTAAATTATGTGACCATAATGTACT  
GATTTTCAGTAAGTCTCATAGGTTAAAAAAGGTACCAAATAGTGTGAAATATATTACTTAACTGTCCGTAAAG  
CAGTATATTAGTATTATCTTGTTCAGGAAAAGGTTGAATAATATATGCCTTGTGTAAATATTGAAAATTGAAAAGT  
ACAATAACGCAACCAAGTGTGCTAAAAATGAGCTTGATTAAATCAACCACCTATTTTTGACATGGAAATGAAGC  
AGGGTTTTCTTTTCTTCACTCAAATTTTGGCGAATCTCAAAATTAGATCCCTAAGATGTGTTCTTATTTTTATAACA  
TCTTTATTGAAATTTCTATTTATAATACAGAATCTTGTTTTGAAAATAACCTAATTAATATATTAAAATTCCAAAT  
TCATGGCATGCTTAAATTTTAACTAAATTTTAAAGCCATTCTGATTATTGAGTTCAGTTGAAGTTAGTGGAAT  
CTGAACATTCTCCTGTGGAAGGCAGAGAAATCTAAGCTGTGTCTGCCAATGAATAATGGAAAATGCCATGAATT  
ACCTGGATGTTCTTTTTACGAGGTGACAAGAGTTGGGGACAGAACTCCCATTAACAAGTACCAAGTTTCTCTTCT  
AGATGATTTTTTGAAAGTTAACATTAATGCCTGCTTTTTTGAAAGTCAGAAATCAGAAGATAGTCTTGAAGCTGT  
TTGAAAAGACAGTGGAGATGAGGTGAGTTGTGTTTTTAAGATGGCAATTACTTTGGTAGCTGGGAAAGCATAA

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**FIGURE 509B**

AGCTCAAATGAAATGTATGCATTACATTTAGAAAAGTGAATTGAAGTTTCAAGTTTTAAAGTTCATTGCAATTA  
AACTTCCAAAGAAAGTTCTACAGTGTCTAAGTGCTAAGTGCTTATTACATTTTATTAAGCTTTTTGGAATCTTT  
GTACCAAAATTTTAAAAAGGGAGTTTTTGATAGTTGTGTGTATGTGTGTGTGGGGTGGGGGGATGGTAAGAGAA  
AAGAGAGAAACACTGAAAAGAAGGAAAGATGGTTAAACATTTTCCCCTCATTCTGAATTAATTAATTTGGAGCA  
CAAAATTCAAAGCATGGACATTTAGAAGAAAGATGTTTGGCGTAGCAGAGTTAAATCTCAAATAGGCTATTAAAA  
AAGTCTACAACATAGCAGATCTGTTTTGTGGTTTGGGAATATTAAAAAACTTCATGTAATTTTATTTTAAAAATTC  
ATAGCTGTACTTCTTGAATATAAAAAATCATGCCAGTATTTTTTAAAGGCATTAGAGTCAACTACACAAAGCAGGC  
TTGCCCAGTACATTTAAATTTTTTGGCACTTGCCATTCCAAAATATTATGCCCCACCAAGGCTGAGACAGTGAAT  
TTGGGCTGCTGTAGCCTATTTTTTTTAGATTGAGAAATGTGTAGCTGCAAAAATAATCATGAACCAATCTGGATGC  
CTCATTATGTCAACCAGGTCCAGATGTGCTATAATCTGTTTTTACGTATGTAGGCCCAGTCGTCATCAGATGCTT  
GCGGCAAAAGAAAGCTGTGTTTATATGGAAGAAAGTAAGGTGCTTGGAGTTTACCTGGCTTATTTAATATGCTTA  
TAACCTAGTTAAAGAAAGGAAAAGAAAACAAAAACGAATGAAAATAACTGAATTTGGAGGCTGGAGTAATCAGA  
TTACTGCTTTAATCAGAAACCCTCATTGTGTTTCTACCGGAGAGAGAATGTATTTGCTGACAACCATTAAGTCA  
GAAGTTTTACTCCAGGTTATTGCAATAAAGTATAATGTTTATTAAATGCTTCATTTGTATGTCAAAGCTTTGACT  
CTATAAGCAAATTGCTTTTTTCCAAAACAAAAAGATGTCTCAGGTTTGTGTTTGTGAATTTTCTAAAAGCTTTCAT  
GTCCCAGAACTTAGCCTTTACCTGTGAAGTGTTACTACAGCCTTAATATTTTCTAGTAGATCTATATTAGATCA  
AATAGTTGCATAGCAGTATATGTTAATTTGTGTGTTTTTAGCTGTGACACAACCTGTGTGATTAAAAGGTATACTT  
TAGTAGACATTTATAACTCAAGGATACCTTCTTATTTAATCTTTTCTTATTTTTGTACTTTATCATGAATGCTTT  
TAGTGTGTGCATAATAGCTACAGTGCATAGTTGTAGACAAAGTACATTCTGGGGAAACAACATTTATATGTAGCC  
TTTACTGTTTGATATACCAATTAAAAAAAATTGTATCTCATTACTTATACTGGGACACCATTACCAAAATAAT  
AAAAATCACTTTCATAATCTTGAAAAAA



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**FIGURE 510**

MGTSLSPNDPWPLNPLSIQQTLLLLLSVLATVHVGQRLLRQRRRQLRSAPPGPFAWPLIGNAAAVGQAAHLSFA  
RLARRYGDVFQIRLGSCPIVVLNGERAIHQALVQQGSAFADRPAPAFASFRVVS GGRSMAFGHYSEHWKVQRRAAHS  
MMRNFFTRQPRSRQVLEGHVLSEARELVALLVRGSADGAFLDPRPLTVVAVANVMSAVCFGC RYSHDDPEFRELL  
SHNEEFGRTVGAGSLVDVMPWLQYFPNPVRTVFRFEQ LNRNFSNFILDKFLRHCESLRPGAAPRDMMDAFILSA  
EKKAAGDSHG G GARLDLENVPATITDIFGASQDTLSTALQWLLLLFTRYPDVQTRVQAELDQVVGRDRLPCM GDQ  
PNLPYVLAFLYEAMRFSSFVPVTIPHATTANTSVLGYHIPKDTVVFVNQWSVNHD PVKWPNPENFDPARFLDKDG  
LINKDLTSRVMIFSVGKRRCIGEELSKMQFLFLFISILAHQCDFRANPNEP AKMNFSYGLTIKPKSFKNVNTLRES  
MELLD SAVQNLQAKETCQ

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**FIGURE 511A**

CGGACCGAGAAGATGCCCCGCCCTGCGCCCCGCTCTGCTGTGGGCGCTGCTGGCGCTCTGGCTGTGCTGCGCGACC  
CCCCGCGCATGCATTGCAGTGTGAGATGGCTATGAACCCCTGTGTAAATGAAGGAATGTGTGTTACCTACCACAAT  
GGCACAGGATACTGCAAATGTCCAGAAGGCTTCTTGGGGGAATATTGTCAACATCGAGACCCCTGTGAGAAGAAC  
CGCTGCCAGAATGGTGGGACTTGTGTGGCCCAGGCCATGCTGGGGAAAGCCACGTGCCGATGTGCCCTCAGGGTTT  
ACAGGAGAGGACTGCCAGTACTCGACATCTCATCCATGCTTTGTGTCTCGACCCTGCCTGAATGGCGGCACATGC  
CATATGCTCAGCCGGGATACCTATGAGTGCACCTGTCAAGTCGGGTTTACAGGTAAGGAGTGCCAATGGACCGAT  
GCCTGCCTGTCTCATCCCTGTGCAAATGGAAGTACCTGTACCCTGTGGCCAACCAAGTTCTCCTGCAAATGCCTC  
ACAGGCTTCACAGGGCAGAAATGTGAGACTGATGTCAATGAGTGTGACATTCCAGGACACTGCCAGCATGGTGGC  
ACCTGCCTCAACCTGCCTGGTTTCTACCAGTGCCAGTGCCTTCAGGGCTTCACAGGCCAGTACTGTGACAGCCTG  
TATGTGCCCTGTGCACCCTCGCCTTGTGTCAATGGAGGCACCTGTGCGCAGACTGGTGACTTCACTTTTGTGAGTGC  
AACTGCCTTCCAGGTTTTGAAGGGAGCACCTGTGAGAGGAATATTGATGACTGCCCTAACACAGGTGTGAGAAT  
GGAGGGGTTTTGTGTGGATGGGGTCAACACTTACAACCTGCCGCTGTCCCCACAATGGACAGGACAGTTCTGCACA  
GAGGATGTGGATGAATGCCTGCTGCAGCCCAATGCCTGTCAAAATGGGGGCACCTGTGCCAACCGCAATGGAGGC  
TATGGCTGTGTATGTGTCAACGGCTGGAGTGGAGATGACTGCAGTGAGAACATTGATGATTGTGCCCTTCGCCCTCC  
TGTAATCCAGGCTCCACCTGCATCGACCGTGTGGCCTCCTTCTCTTGCATGTGCCCAGAGGGGAAGGCAGGTCTC  
CTGTGTCTATCTGGATGATGCATGCATCAGCAATCCTTGCCACAAGGGGGCACTGTGTGACACCAACCCCTAAAT  
GGGCAATATATTTGCACCTGCCACAAGGCTACAAAGGGGCTGACTGCACAGAAGATGTGGATGAATGTGCCATG  
GCCAATAGCAATCCTTGTGAGCATGCAGGAAAATGTGTGAACACGGATGGCGCCTTCCACTGTGAGTGTCTGAAG  
GGTTATGCAGGACCTCGTTGTGAGATGGACATCAATGAGTGCCATTTCAGACCCCTGCCAGAATGATGCTACCTGT  
CTGGATAAGATTGGAGGCTTCACATGTCTGTGCATGCCAGGTTTCAAAGGTGTGCATTGTGAATTAGAAAATAAAT  
GAATGTGACAGCAACCCCTTGTGTGAACAATGGGCAGTGTGTGGATAAAGTCAATCGTTTCCAGTGCCTGTGTCTCT  
CCTGGTTTTCACTGGGGCAGTTTGCCAGATTGATATTGATGACTGTTCCAGTACTCCGTGTCTGAATGGGGCAAAG  
TGTATCGATCACCCGAATGGCTATGAATGCCAGTGTGCCACAGGTTTCACTGGTGTGTTGTGTGAGGAGAACATT  
GACAACTGTGACCCCGATCCTTGCCACCATGGTTCAGTGTGAGGATGGTATTGATTCCCTACACCTGCATCTGCAAT  
CCCCGGGTACATGGGCGCCATCTGCAGTGACCAGATTGATGAATGTTACAGCAGCCCTTGCCCTGAACGATGGTCGC  
TGCAATTGACCTGGTCAATGGCTACCAGTGCAACTGCCAGCCAGGCACGTGAGGGGTTAATTGTGAAATTAATTTT  
GATGACTGTGCAAGTAACCCCTTGTATCCATGGAATCTGTATGGATGGCATTAAATCGCTACAGTTGTGTCTGTCTCA  
CCAGGATTACAGGGCAGAGATGTAAACATTGACATTGATGAGTGTGCCTCCAATCCCTGTGCAAGGGTGCAACA  
TGTATCAACGGTGTGAATGGTTTTCCGCTGTATATGCCCGAGGGACCCCATCACCCAGCTGCTACTCACAGGTG  
AACGAATGCCTGAGCAATCCCTGCATCCATGGAACTGTACTGGAGGTCTCAGTGGATATAAGTGTCTCTGTGAT  
GCAGGCTGGGTGGCATCAACTGTGAAGTGGACAAAAATGAATGCCTTTTCAATCCATGCCAGAATGGAGGAACT  
TGTGACAACTCTGGTGAATGGATACAGGTGTACTTGCAAGAAGGGCTTTAAAGGCTATAACTGCCAGGTGAATATT  
GATGAATGTGCCCTCAATCCATGCCTGAACCAAGGAACCTGCTTTGATGACATAAGTGGCTACACTTGCCACTGT  
GTGCTGCCATACACAGGCAAGAATTGTGACAGATATTGGCTCCCTGTTCCCCAAACCCTTGTGAGAATGCTGCT  
GTTTGCAAAGAGTCACCAAATTTTGAGAGTTATACTTGCTTGTGTGCTCCTGGCTGGCAAGGTGAGCGGTGTACC  
ATTGACATTGACGAGTGTATCTCCAAGCCCTGCATGAACCATGGTCTCTGCCATAACACCCAGGGCAGCTACATG  
TGTGAATGTCCACCAGGCTTCAGTGGTATGGACTGTGAGGAGGACATTGATGACTGCCTTGCCAATCCTTGCCAG  
AATGGAGGTTCTGTATGGATGGAGTGAATACTTTCTCTCTGCTCTGCCTTCCGGGTTTTCACTGGGGATAAGTGC  
CAGACAGACATGAATGAGTGTCTGAGTGAACCTGTAAAGATGGAGGGACCTGCTCTGACTACGTCAACAGTTAC  
ACTTGCAAGTGCCAGGCAGGATTGATGGAGTCCATTGTGAGAACCAATCAATGAGTGCCTGAGAGCTCCTGT  
TTCAATGGTGGCACATGTGTTGATGGGATTAACCTCTCTCTTGTGCTTGTGCCCTGTGGGTTTTCACTGGATCCTTC  
TGCTTCCATGAGATCAATGAATGCAGCTCTCATCCATGCCTGAATGAGGGAACGTGTGTTGATGGCCTGGGTACC  
TACCGCTGCAGCTGCCCCCTGGGCTACACTGGGAAAAACTGTGACACCCCTGGTGAATCTCTGCAGTCGGTCTCCA  
TGTA AAAACAAAGGTACTTGC GTTCAGAAAAAGCAGAGTCCCAGTGCCTATGTCCATCTGGATGGGCTGGTGCC  
TATTGTGACGTGCCCAATGTCTCTTGTGACATAGCAGCCTCCAGGAGAGGTGTGCTTGTGTAACACTTGTGCCAG  
CACTCAGGTGTCTGCATCAATGCTGGCAACACGCATTACTGTGAGTGCCCCCTGGGCTATACTGGGAGCTACTGT  
GAGGAGCAACTCGATGAGTGTGCGTCCAACCCCTGCCAGCACGGGGCAACATGCAGTGAATTCATTGGTGGATAC  
AGATGCGAGTGTGTCCAGGCTATCAGGGTGTCAACTGTGAGTATGAAGTGGATGAGTGCCAGAATCAGCCCTGC

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**FIGURE 511B**

CAGAATGGAGGCACCTGTATTGACCTTGTGAACCATTTC AAGTGCTCTTGCCCACCAGGCACTCGGGGCCTACTC  
TGTGAAGAGAACATTGATGACTGTGCCCCGGGGTCCCCATTGCCTTAATGGTGGTCAGTGCATGGATAGGATTGGA  
GGCTACAGTTGTCTGCTTGCTTGCTTTGCTGGGGAGCGTTGTGAGGGAGACATCAACGAGTGCCTCTCCAAC  
CCCTGCAGCTCTGAGGGCAGCCTGGACTGTATACAGCTCACCAATGACTACCTGTGTGTTTGCCGTAGTGCCTTT  
ACTGGCCGGCACTGTGAAACCTTCGTTCGATGTGTGTCCCCAGATGCCCTGCCTGAATGGAGGGACTTGTGCTGTG  
GCCAGTAACATGCCTGATGGTTTTCAATTTGCCGTTGTCCCCCGGGATTTTCCGGGGCAAGGTGCCAGAGCAGCTGT  
GGACAAGTAAAATGTAGGAAGGGGGAGCAGTGTGTGCACACCGCCTCTGGACCCCGCTGCTTCTGCCCCAGTCCC  
CGGGACTGCGAGTCAGGCTGTGCCAGTAGCCCCCTGCCAGCACGGGGGCAGCTGCCACCCTCAGCGCCAGCCTCCT  
TATTACTCCTGCCAGTGTGCCCCACCATTCTCGGGTAGCCGCTGTGAACTCTACACGGCACCCCCCAGCACCCCT  
CCTGCCACCTGTCTGAGCCAGTATTGTGCCGACAAAGCTCGGGATGGCGTCTGTGATGAGGCCTGCAACAGCCAT  
GCCTGCCAGTGGGATGGGGGTGACTGTTCTCTACCATGGAGAACCCCTGGGCCAACTGCTCCTCCCCACTTCCC  
TGCTGGGATTATATCAACAACCAGTGTGATGAGCTGTGCAACACGGTCGAGTGCCTGTTTGACAACCTTGAATGC  
CAGGGGAACAGCAAGACATGCAAGTATGACAAATACTGTGCAGACCACTTCAAAGACAACCACTGTGACCAGGGG  
TGCAACAGTGAGGAGTGTGGTTGGGATGGGCTGGACTGTGCTGCTGACCAACCTGAGAACCTGGCAGAAGGTACC  
CTGGTTATTGTGGTATTGATGCCACCTGAACAACCTGCTCCAGGATGCTCGCAGCTTCTTGCGGGCACTGGGTACC  
CTGCTCCACACCAACCTGCGCATTAAGCGGGACTCCCAGGGGGAACCTCATGGTGTACCCCTATTATGGTGAGAAG  
TCAGCTGCTATGAAGAAACAGAGGATGACACGCAGATCCCTTCCTGGTGAACAAGAACAGGAGGTGGCTGGCTCT  
AAAGTCTTTCTGGAAATTGACAACCGCCAGTGTGTTCAAGACTCAGACCACTGCTTCAAGAACACGGATGCAGCA  
GCAGCTCTCCTGGCCTCTCACGCCATACAGGGGACCCCTGTCATACCCCTCTTGCTGTCTGTGCTCAGTGAATCCCTG  
ACTCCAGAACGCACTCAGCTCCTCTATCTCCTTGCTGTTGCTGTTGTCATCATTCTGTTTATTATTCTGCTGGGG  
GTAATCATGGCAAAACGAAAGCGTAAGCATGGCTCTCTCTGGCTGCCTGAAGGTTTCACTCTTCGCCGAGATGCA  
AGCAATCACAAGCGTCGTGAGCCAGTGGGACAGGATGCTGTGGGGCTGAAAAATCTCTCAGTGCAAGTCTCAGAA  
GCTAACCTAATTGGTACTGGAACAAGTGAACACTGGGTGCGATGATGAAGGGCCCCAGCCAAAGAAAGTAAAGGCT  
GAAGATGAGGCCCTTACTCTCAGAAGAAGATGACCCCATTTGATCGACGGCCATGGACACAGCAGCACCTTGAAGCT  
GCAGACATCCGTAGGACACCATCGCTGGCTCTCACCCCTCCTCAGGCAGAGCAGGAGGTGGATGTGTTAGATGTG  
AATGTCCGTGGCCAGATGGCTGCACCCCATTTGATGTTGGCTTCTCTCCGAGGAGGCAGCTCAGATTTGAGTGTG  
GAAGATGAAGATGCAGAGGACTCTTCTGCTAACATCATCACAGACTTGGTCTACCAGGGTGCCAGCCTCCAGGCC  
CAGACAGACCGGACTGGTGAGATGGCCCTGCACCTTGACGCCCGCTACTCACGGGCTGATGCTGCCAAGCGTCTC  
CTGGATGCAGGTGCAGATGCCAATGCCCAGGACAACATGGGCGCGCTGTCCTACTCCATGCTGCAGTGGCAGCTGAT  
GCCCCAAGGTGTCTTCCAGATTCTGATTGCAACCGAGTAACTGATCTAGATGCCAGGATGAATGATGGTACTACA  
CCCCTGATCCTGGCTGCCCGCTGGCTGTGGAGGGAATGGTGGCAGAAGTGAATCAACTGCCAAGCGGATGTGAAT  
GCAGTGGATGACCATGGAAAATCTGCTCTTCACTGGGCAGCTGCTGTCAATAATGTGGAGGCAACTCTTTTGTG  
TTGAAAAATGGGGCCAACCGAGACATGCAGGACAACAAGGAAGAGACACCTCTGTTTCTTGCTGCCCCGGGAGGGG  
AGCTATGAAGCAGCCAAGATCCTGTTAGACCATTTTGCCAATCGAGACATCACAGACCATATGGATCGTCTTCCC  
CGGGATGTGGCTCGGGATCACATGCACCATGACATTGTGCGCCTTCTGGATGAATACAATGTGACCCCCAAGCCCT  
CCAGGCACCGTGTGACTTCTGCTCTCTCACCTGTCTGCTGTTGGGGCCCAACAGATCTTTCCTCAGCCTGAAGCAC  
ACCCCAATGGGCAAGAAGTCTAGACGGCCAGTGCCAAGAGTACCATGCCTACTAGCCTCCCTAACCTTGCCAAG  
GAGGCAAAGGATGCCAAGGGTAGTAGGAGGAAGAAGTCTCTGAGTGAGAAGGTCCAAGTGTCTGAGAGTTCAGTA  
ACTTTATCCCCTGTTGATTCCCTAGAATCTCCTCACACGTATGTTTCCGACACCACATCCTCTCCAATGATTACA  
TCCCCTGGGATCTTACAGGCCTCACCCAACCTATGTTGGCCACTGCCGCCCTCCTGCCCCAGTCCATGCCAG  
CATGCACTATCTTTTTCTAACCTTCATGAAATGCAGCCTTTGGCACATGGGGCCAGCACTGTGCTTCCCTCAGTG  
AGCCAGTTGCTATCCCACCACCACATTGTGTCTCCAGGCAGTGGCAGTGTGGAAGCTTGAGTAGGCTCCATCCA  
GTCCAGTCCCAGCAGATTGGATGAACCGCATGGAGGTGAATGAGACCCAGTACAATGAGATGTTTGGTATGGTC  
CTGGCTCCAGCTGAGGGCACCCATCCTGGCATAGCTCCCCAGAGCAGGCCACCTGAAGGGAAGCACATAACCACC  
CCTCGGGAGCCCTTGCCCCCATTTGTGACTTTCCAGCTCATCCCTAAAGGCAGTATTGCCCAACCAGCGGGGGCT  
CCCCAGCCTCAGTCCACCTGCCCTCCAGCTGTTGCGGGCCCCCTGCCACCATGTACCAGATTCCAGAAATGGCC  
CGTTTGGCCAGTGTGGCTTTCCCCACTGCCATGATGCCCCAGCAGGACGGGCAGGTAGCTCAGACCATTTCTCCA  
GCCTATCATCCTTTCCAGCCTCTGTGGGCAAGTACCCACACCCCTTCACAGCACAGTTATGCTTCCCTCAAAAT

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**FIGURE 511C**

GCTGCTGAGCGAACACCCAGTCACAGTGGTCACCTCCAGGGTGAGCATCCCTACCTGACACCATCCCCAGAGTCT  
CCTGACCAGTGGTCAAGTTCATCACCCCACTCTGCTTCTGACTGGTCAGATGTGACCACCAGCCCTACCCCTGGG  
GGTGCTGGAGGAGGTTCAGCGGGGACCTGGGACACACATGTCTGAGCCACCACACAACAACATGCAGGTTTATGCG  
TGAGAGAGTCCACCTCCAGTGTAGAGACATAACTGACTTTTTGTAAATGCTGCTGAGGAACAAATGAAGGTCATCC  
GGGAGAGAAATGAAGAAATCTCTGGAGCCAGCTTCTAGAGGTAGGAAAGAGAAGATGTTCTTATTTCAGATAATGC  
AAGAGAAGCAATTCGTCAGTTTCACTGGGTATCTGCAAGGCTTATTGATTATTCTAATCTAATAAGACAAGTTTG  
TGGAAATGCAAGATGAATACAAGCCTTGGGTCCATGTTTACTCTCTTCTATTTGGAGAATAAGATGGATGCTTAT  
TGAAGCCCAGACATTCTTGCAGCTTGGACTGCATTTTAAAGCCCTGCAGGCTTCTGCCATATCCATGAGAAGATTC  
TACACTAGCGTCTCTGTTGGGAATTATGCCCTGGAATTCTGCCTGAATTGACCTACGCATCTCCTCCTCCTTGGAC  
ATTCTTTTGTCTTCATTTGGTGTCTTTGGTTCACCTCTCCGTGATTGTAGCCCTACCAGCATGTTATAGGGC  
AAGACCTTTGTGCTTTTGTATCATTCTGGCCCATGAAAGCAACTTTGGTCTCCTTTCCCTCCTGTCTTCCCGGTA  
TCCCTTGGAGTCTCACAAGGTTTACTTTGGTATGGTTCTCAGCACAAACCTTTCAAGTATGTTGTTTCTTTGGAA  
AATGGACATACTGTATTGTGTTCTCCTGCATATATCATTCTGGAGAGAGAAGGGGAGAAGAATACTTTTCTTCA  
ACAAATTTTGGGGGAGGAGATCCCTTCAAGAGGCTGCACCTTAATTTTCTTGTCTGTGTGCAGGTCTTCATAT  
AAACTTTACCAGGAAGAAGGGTGTGAGTTTGTGTTTTCTGTGTATGGGCCTGGTCAGTGTAAGTTTATCCT  
TGATAGTCTAGTTACTATGACCCTCCCCACTTTTTTAAAACCAGAAAAAGGTTTGAATGTTGGAATGACCAAGA  
GACAAGTTAACTCGTGCAAGAGCCAGTTACCCACCCACAGTCCCCCTACTTCTGCCAAGCATTCCATTGACTG  
CCTGTATGGAACACATTTGTCCCAGATCTGAGCATTCTAGGCCTGTTTCACTCACTACCCAGCATATGAACTA  
GTCTTAACTGTTGAGCCTTTCTTTTCATATCCACAGAAGACACTGTCTCAAATGTTGTACCCCTGCCATTTAGGA  
CTGAACTTTCTTTAGCCCAAGGGACCCAGTGACAGTTGTCTTCCGTTTGTGAGATGATCAGTCTCTACTGATTAT  
CTTGCTGCTTAAAGGCCTGCTCACCAATCTTTCTTTCACACCGTGTGGTCCGTGTTACTGGTATAACCAGTATGT  
TCTCACTGAAGACATGGACTTTTATATGTTCAAGTGCAGGAATTGGAAAGTTGGACTTGTTTTCTATGATCCAAAA  
CAGCCCTATAAGAAGGTTGGAAAAGGAGGAACCTATATAGCAGCCTTTGCTATTTTCTGCTACCATTTCTTTTCT  
CTGAAGCGGCCATGACATTCCCTTTGGCAACTAACGTAGAACTCAACAGAACATTTTCTTTCTTAGAGTCACC  
TTTTAGATGATAATGGACAACCTATAGACTTGCTCATTGTTTCACTGATTGCCCTCACCTGAATCCACTCTCTG  
TATTCAATGCTCTTGGCAATTTCTTTGACTTTCTTTTAAAGGGCAGAAGCATTTTAGTTAATTGTAGATAAAGAATA  
GTTTTCTTCTCTTCTCCTTGGGCCAGTTAATAATTGGTCCATGGCTACACTGCAACTTCCGTCCAGTGCTGTGA  
TGCCCATGACACCTGCAAAATAAGTTCTGCCTGGGCATTTTGTAGATATTAACAGGTGAATTTCCCGACTCTTTTG  
GTTTGAATGACAGTTCTCATTCTCTATGGCTGCAAGTATGCATCAGTGCTTCCCACTTACCTGATTGTCTGT  
CGGTGGCCCCATATGGAAACCTGCGTGTCTGTTGGCATAATAGTTTACAAATGGTTTTTTTTCAGTCTATCCAAA  
TTTATTGAACCAACAAAAATAATTACTTCTGCCCTGAGATAAGCAGATTAAGTTTGTTCATTCTCTGCTTTATTC  
TCTCCATGTGGCAACATTCTGTGAGCCTCTTTCATAGTGTGCAACATTTTATCATTCTAAATGGTGACTCTCTG  
CCCTTGGACCCATTTATTATTACAGATGGGGAGAACCTATCTGCATGGACCTCTGTGGACCACAGCGTACCTGC  
CCCTTTCTGCCCTCCTGCTCCAGCCCCACTTCTGAAAGTATCAGCTACTGATCCAGCCACTGGATATTTTATATC  
CTCCCTTTTCTTAAAGCAATGTGACACAAATTGCTTGTTCCTTTTCTTGGACTACTTTAATTTGGATCCTT  
TGGGTTTGGAGAAAGGGAATGTGAAAGCTGTCAATTACAGACAACAGGTTTCAGTGATGAGGAGGACAACACTGCC  
TTTCAAACTTTTTACTGATCTCTTAGATTTTAAAGAACTCTTGAATTGTGTGGTATCTAATAAAAGGGAAAGGTAAG  
ATGGATAATCACTTTCTCATTGGGTTCTGAATTGGAGACTCAGTTTTTATGAGACACATCTTTTATGCCATGTA  
TAGATCCTCCCTGCTATTTTTGGTTTTATTTTATTGTTATAAATGCTTTCTTTTCTTGGACTCCTCTTCTGCCTG  
CCTTTGGGGATAGGTTTTTTTTGTTTGTGTTTATTGCTTCTCTGTTTTGTTTTAAGCATCATTTTCTTATGTGAGG  
TGGGGAAGGGAAAGGTATGAGGGAAGAGAGTCTGAGAATTAAATATTTTAGTATAAGCAATTGGCTGTGATGC  
TCAAATCCATTGCATCCTCTTATTGAATTTGCCAATTTGTAATTTTTGCATAATAAAGAACCAAAGGTGTAATGT  
TTTGTGAGAGGTGGTTTAGGGATTTTGGCCCTAACCAATACATTGAATGTATGATGACTATTTGGGAGGACACA  
TTTATGTACCCAGAGGCCCCCACTAATAAGTGGTACTATGGTTACTTCTTGTGTACATTTCTCTTAAAGTGAT  
ATTATATCTGTTTGTATGAGAAACCCAGTAACCAATAAAATGACCGCATATTCCTGACTAAACGTAGTAAGGAAA  
ATGCACACTTTGTTTTTACTTTTCCGTTTCATTCTAAAGGTAGTTAAGATGAAATTTATATGAAAGCATTTTTAT  
CACAAAATAAAAAAGGTTTGGCAAGCTCAGTGGTGTGATTTTTTATTTTCCAATACTGCATCCATGGCCTGGC  
AGTGTTACCTCATGATGTCATAATTTGCTGAGAGAGCAAATTTCTTTTCTTCTGAATCCCACAAAGCCTAGCA

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**FIGURE 511D**

CCAAACTTCTTTTTTCTTCCTTTAATTAGATCATAAATAAATGATCCTGGGGAAAAAGCATCTGTCAAATAGGA  
AACATCACAAAAGTGAAGCACTCTTCTGTGCACTAGCCATAGCTGGTGACAAACAGATGGTTGCTCAGGGACAAGG  
TGCCTTCCAATGGAAATGCGAAGTAGTTGCTATAGCAAGAATTGGGAACTGGGATATAAGTCATAATATTAATTA  
TGCTGTTATGTAAATGATTGGTTTGTAACATTCCTTAAGTGAAATTTGTGTAGAACTTAATATACAGGATTATAA  
AATAATATTTTGTGTATAAATTTGTTATAAGTTCACATTCATACATTTATTTATAAAGTCAGTGAGATATTTGAA  
CATGAAAAAAAAA

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**FIGURE 512**

MPALRPALLWALLALWLCCATPAHALQCRDGYEPCVNEGMCVTYHNGTGYCKCEGFLGEYCQHRDPCEKNRCQN  
GGTCVAQAMLGKATCRCASGFTGEDCQYSTSHPCFVSRPCLNGGTCHMLSRDTYECTCQVGFTGKECQWTDACLS  
HPCANGSTCTTVANQFSCKCLTGFTGQKCETDVNECDIPGHCQHGGTCLNLPGSYQCQCLQGFTGQYCDSLYVPC  
APSPCVNGGTCRQTGDFTFECNCLPGFEGSTCERNIDDCPNHRCQNGGVCVDGVNTYNCRCPPQWTGQFCTEDVD  
ECLLQPNACQNGGTICANRNGGYGCVCVNGWSGDDCSENIDDCAFASCTPGSTCIDRVASFSCMCPEGKAGLLCHL  
DDACISNPCHKGALCDTNPLNGQYICTCPQGYKGADCTEDVDECAMANSNPCEHAGKCVNTDGAFFHCECLKGYAG  
PRCEMDINECHSDPCQNDATCLDKIGGFTCLCMPGFKGVHCELEINECQSNPCVNNGQCVDKVNRFQCLCPPGFT  
GPVCQIDIDDCSSTPCLNGAKCIDHPNGYECQCATGFTGVLCEENIDNCDPDPCHHGQCQDGDIDSYTCICNPGYM  
GAICSDQIDECYSSPCLNDGRCIDLNGYQCNCQPGTSGVNCEINFDDCASNPCHGICMDGINRYSCVCSPGFT  
GQRCNIDIDECASNPCRKGATCINGVNGFRICPEGPHHPSCYSQVNECLSNPCHGNCTGGLSGYKCLCDAGWV  
GINCEVDKNECLSNPCQNGGTCDNLVNGYRCTCKKGFKGYNCQVNIDECASNPCLNQGTCTFDDISGYTCHCVLPY  
TGKNCQTVLAPCSPNPCENAAVCKESPNEFESYTCLCAPGWQQRCTIDIDECISKPCMNHGLCHNTQGSYMCECP  
PGFSGMDCEEDIDDCLANPCQNGGSCMDGVNTFSCLCLPGFTGDKCQDTMNECLSEPCKNGGTCSDYVNSYTCKC  
QAGFDGVHCENNINECTESSCFNGGTCVDGINSFSCCLCPVGFTGSFCLHEINECSSHPCLNEGTCVDGLGTYRCS  
CPLGYTGKNCQTLVNLCRSRSPCKNKGTCVQKKAESQCLCPSGWAGAYCDVPNVSCDIAASRRGVLEHLCQHSGV  
CINAGNTHYCQCPLGYTGSYCEEQLDECASNPCQHGATCSDFIGGYRCECVPGYQGVNCEYEVDECQNQPCQNGG  
TCIDLNVNHFKCSCPPGTRGLLCEENIDDCARGPHCLNGGQCMDRIGGYSCRCLPGFAGERCEGDINECLSNPCSS  
EGSLDCIQLTNDYLCVCRSAFTGRHCETFDVDCPQMPCLNGGTCAVASNMPDGFICRCPGPGFSGARCQSSCGQVK  
CRKGEQCVHTASGPRCFPSPRDCESGCASSPCQHGGSCHPQRQPPYYSCQCAPPFSGSRCELYTAPPSTPPATC  
LSQYCADKARDGVCDEACNSHACQWDGGDCSLTMENPWANCSSPLPCWDYINNQCDELCTVECLFDNFECQGNS  
KTCKYDKYCADHFKDNHCDQGCNSEECGWDGLDCAADQOPENLAEGTLVIVVLMPEQLLQDARSFLRALGTLTLLHT  
NLRIKRDSQGELMVYPYGEKSAAMKKQRMTRRSIPGEQEVEVAGSKVFLEIDNRQCVQDSDFHCFKNTDAAAALL  
ASHAIQGTLSYPLSVSVSESLTPERTQLLYLLAVAVVIIIFIILLGVIMAKRKRKHGSLWLPEGFTLRRDASNHK  
RREPVGQDAVGLKNLSVQVSEANLIGTGTSEHWVDDEGPQPKKVAEDEALLSEEDDPIDRRPWTQQHLEAADIR  
RTPSLALTTPQAEQEVDVLDVNVVRGPDGCTPLMLASLRGSSDLSEDEDAEDSSANIITDLVYQGASLQAQTDR  
TGEMALHLAARYSRADAARLLDAGADANAQDNMGRCPHAAVAADAQGVFQILIRNRVTDLDARMNDGTTPLIL  
AARLAVEGMVAELINCQADVNAVDDHGKSALHWAAAVNNVEATLLLLKNG

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**FIGURE 513**

GAAACAAGCACTGGATTCCATATCCCACTGCCAAAACCGCATGGTTCAGATTATCGCTATTGCAGCTTTCATCAT  
AATACACACCTTTGCTGCCGAAACGAAGCCAGACAACAGATTTCCATCAGCAGGATGTGGGGGGCTCAAGGTTCTG  
CTGCTACCTGTGGTGAGCTTTGCTCTGTACCCTGAGGAGATACTGGACACCCACTGGGAGCTATGGAAGAAGACC  
CACAGGAAGCAATATAACAACAAGGTGGATGAAATCTCTCGGCGTTTAATTTGGGAAAAAACCTGAAGTATATT  
TCCATCCATAACCTTGAGGCTTCTCTTGGTGTCCATACATATGAACCTGGCTATGAACCACCTGGGGGACATGACC  
AGTGAAGAGGTGGTTTCAAGATGACTGGACTCAAAGTACCCCTGTCTCATTCCCGCAGTAATGACACCCTTTAT  
ATCCCAGAATGGGAAGGTAGAGCCCCAGACTCTGTGACTATCGAAAGAAAGGATATGTTACTCCTGTCAAAAAT  
CAGGGTCAGTGTGGTTTCTGTGGGCTTTTAGCTCTGTGGGTGCCCTGGAGGGCCAACCTCAAGAAGAAAACCTGGC  
AAACTCTTAAATCTGAGTCCCCAGAACCTAGTGGATTGTGTGTCTGAGAATGATGGCTGTGGAGGGGGCTACATG  
ACCAATGCCTTCCAATATGTGCAGAAGAACCGGGGTATTGACTCTGAAGATGCCTACCCATATGTGGGACAGGAA  
GAGAGTTGTATGTACAACCCAACAGGCAAGGCAGCTAAATGCAGAGGGTACAGAGAGATCCCCGAGGGGAATGAG  
AAAGCCCTGAAGAGGGCAGTGGCCCGAGTGGGACCTGTCTCTGTGGCCATTGATGCAAGCCTGACCTCCTTCCAG  
TTTTACAGCAAAGGTGTGTATTATGATGAAAGCTGCAATAGCGATAATCTGAACCATGCGGTTTTGGCAGTGGGA  
TATGGAATCCAGAAGGGAAACAAGCACTGGATAATTAAAAACAGCTGGGGAGAAAACCTGGGGAAACAAAGGATAT  
ATCCTCATGGCTCGAAATAAGAACAACGCCTGTGGCATTGCCAACCTGGCCAGCTTCCCCAAGATGTGACTCCAG  
CCAGCCAAATCCATCCTGCTCTTCCATTTCTTCCACGATGGTGCAGTGTAAACGATGCACTTTGGAAGGGAGTTGG  
TGTGCTATTTTTGAAGCAGATGTGGTGATACTGAGATTGTCTGTTTCACTTTCCCCATTTGTTTGTGCTTCAAATG  
ATCCTTCCCTACTTTTGCTTCTCTCCACCCATGACCTTTTTTCACTGTGGCCATCAGGACTTTCCCTGACAGCTGTGT  
ACTCTTAGGCTAAGAGATGTGACTACAGCCTGCCCCTGACTGTGTTGTCCAGGGCTGATGCTGTACAGGTACAG  
GCTGGAGATTTTACATAGGTTAGATTCTCATTACGGGACTAGTTAGCTTTAAGCACCCCTAGAGGACTAGGGTA  
ATCTGACTTCTCACTTCCCTAAGTTCCCTTCTATATCCTCAAGGTAGAAATGTCTATGTTTTCTACTCCAATTTCAT  
AAATCTATTTCATAAGTCTTTGGTACAAGTTTACATGATAAAAAGAAATGTGATTTGTCTTCCCTTCTTTGCACCT  
TTGAAATAAAGTATTTATC

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**FIGURE 514**

MWGLKVLLLPVVSFALYPEEILDTHWELWKKTHRQYNNKVDEISRRLIWEKNLKYISIHNLASLGVHTYELAM  
NHLGDMTSEEVVQKMTGLKVPLSHSRSDTLYIPEWEGRAPDSVDYRKKGYVTPVKNQGQCGSCWAFSSVGALEG  
QLKKKTGKLLNLSPQNLVDCVSENDGCGGGYMTNAFQYVQKNRGIDSEDAYPYVGQEESCMYNPTGKAAKCRGYR  
EIIPEGNEKALKRAVARVGPVSVAIDASLTSFQFYSGVYYDESCNSDNLNHAVLAVGYGIQKGNKHIIKNSWGE  
NWGNKGYILMARNKNNACGIANLASFPKM



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**FIGURE 515**

GCGCCGCGGCGCGGAGTCCCGGCTGCGGGATAGACCGAGGGGCC**ATG**GCCGCCTCTCCCGGACCCGCCGGCGTTGG  
CGGCGCCGGAGCAGTCTACGGCTCCGGCTCTTCGGGCTTCGCCCTCGACTCGGGACTGGAGATCAAAACTCGCTC  
GGTGGAGCAGACGCTACTCCCGCTGGTTTTCTCAGATCACCACGCTTATTAATCATAAAGATAATACCAAAAAGTC  
TGATAAAACTCTGCAAGCAATTCAGCGTGTAGGACAAGCTGTCAACTTGGCAGTTGGAAGATTTGTTAAAGTAGG  
AGAAGCTATAGCCAATGAAAACTGGGATTTGAAAGAAGAAATAAATATTGCTTGTATTGAAGCTAAACAAGCAGG  
AGAAACAATTGCAGCACTTACAGACATAACCAACTTGAACCATCTGGAATCTGATGGGCAGATCACAATTTTTTAC  
AGACAAAACAGGAGTGATAAAGGCTGCAAGATTACTTCTTTCTTCAGTGACAAAAGTGTTGTTGCTGGCAGACCG  
AGTAGTCATTAAACAGATAATAACATCAAGAAATAAGGTTCTCGCAACTATGGAAAGACTAGAGAAAGTGAATAG  
CTTTCAAGAGTTTGTCCAAATATTCAGTCAATTTGGAAATGAAATGGTGGAGTTTGACATCTGAGTGGAGATAG  
ACAAAATGATTTGAAAGATGAAAAGAAAAAGGCCAAAATGGCAGCAGCTAGGGCAGTTCTTGAAAAGTGTACAAT  
GATGCTTCTCACAGCTTCAAAGACATGTCTGAGGCATCCTAACTGCGAATCAGCCCATAAAAACAAAGAAGGAGT  
ATTTGACCGTATGAAAGTGGCATTGGATAAGGTCATTGAAATTGTGACTGACTGTAAACCGAATGGAGAGACTGA  
CATTTCACTCTATCAGTATTTTTACTGGAATTAAGGAATTCAAGATGAATATTGAAGCTCTTCGGGAGAATCTTTA  
TTTTCAGTCCAAAGAGAACCTTTCTGTGACATTGGAAGTCATCTTGAGCGTATGGAGGACTTTACTGATTCTGC  
CTACACCAGCCATGAGCACAGAGAACGCATCTTGGAATGTCAACTCAGGCGAGAATGGAAGTGCAGCAGTTAAT  
TTCTGTGTGGATTCAAGCTCAAAGCAAGAAAAACAAAAGCATCGCTGAAGAACTGGAAGTCAAGTATTTTGAAAAT  
CAGTCACAGTCTTAATGAACTTAAGAAAGAACTTCATAGTACAGCGACACAGCTGGCAGCAGATCTATTAAAATA  
CCATGCTGATCATGTGGTTCTAAAAGCATTAAAACCTTACTGGAGTAGAAGGAAATTTAGAAGCTTTGGCTGAATA  
TGCCTGTAAACTCTCTGAACAGAAAGAGCAGCTTGTGTGAGACCTGTCGATTGTTACGACACATATCTGGGACAGA  
ACCTCTGGAAATAACCTGTATACATGCAGAGGAGACATTTCAAGGTGACTGGCCAACAGATAATTTCTGCTGCTGA  
AACATTGACATTGCATCCATCTAGTAAAATTGCTAAAAGAAAACCTAGATGTATTTTGTGAAGCTTGGGAATCCCA  
AATTAGTGACATGTCAACACTGCTGAGAGAAATCAATGACGTGTTTGAAGGAAGACGAGGAGAGAAGTATGGCTA  
CCTTTCACTTCCAAAGCCAATGAAGAATAATGCAAACCTGAAATCATTAAAGCCAGACAAGCCTGACTCTGAGGA  
GCAAGCCAAGATAGCAAAGCTTGGACTTAAGCTGGGTTTGTCTCACCTCTGACGCTGACTGCGAAATTGAGAAGTG  
GGAAGATCAGGAGAATGAGATTGTTCAATATGGACGGAACATGTCCAGTATGGCCTATTCTCTGTATTTATTAC  
TAGAGGAGAGGGGCCACTGAAAACCTCCCAGGATTTAATTCATCAACTAGAGGTTTTTGTCTGCAGAGGGTTTAAA  
GCTTACTTCCAGTGTTCAAGCTTTTTCAAACAGCTGAAAGACGATGACAAGCTTATGCTTCTCCTGGAATAAAA  
CAAGCTAATTCCTCTATGCCACCAGCTCCAGACAGTAACTAAGACTTCTTTGCAGAATAAAGTATTTCTAAAGGT  
TGACAAGTGTATTACGAAGACAAGATCCATGATGGCTCTCTTAGTCCAACCTTCTTTCACTTTGTTATAAACTGCT  
GAAGAAGCTTCAGATGGAAAATAACGGATGGGTCTCAGTTACAAATAAGGACACTATGGATAGTAAAAC**TGAGA**  
AGCTTTTGGGGTCAGATCTCTGGAACATCATGTGATGAAGCTGACATTTTTAAAAATCAAATGATCCTTTATCTT  
TTCAGAAATTCATCAATTTTATAAAGAAAACAATATTGAAATTTTGCTCTATTTTCTGATCATGAAACTGATTGT  
AAAGCTTTTGGACAATAAATGTCTTGGAATTGCTAGATTCT

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**FIGURE 516**

MAASPGPAGVGGAGAVYGS SSGFALDSGLEIKTRSVEQTLLPLVSQITTLINHKDNTKKS DKT LQAIQRVGQAV  
NLAVGRFVKVGEAIANENWDLKEEINIACIEAKQAGETIAALTDITNLNHLES DGQITIFTDKTGVIKAARLLLS  
SVTKVLLLADR VVIKQIITSRNKV LATMERLEKVNSFQEFVQIFS QFGNEMVEFAHLSGDRQNDLKDEKKKAKMA  
AARAVLEKCTMMLLTASKTCLRHPNCESAHKNKEGVFDRMKVALDKVIEIVTDCKPNGETDISSISIFTGIKEFK  
MNIEALRENLYFQSKENLSVTLEVILERMEDFTDSAYTSHEHRERILELSTQARMELQQLISVWIQAQSKKTKSI  
AEELELSILKISHSLNELKKELHSTATQLAADLLKYHADHVVLKALKLTGVEGNLEALAEYACKLSEQKEQLVET  
CRLLRHISGTEPLEITCIHAEETFQVTGQQIISAAETTLHPSSKIAKENLDVFCEAWESQISDMSTLLREINDV  
FEGRRGEKYGYLSLPKPMKNNANLKS LKPD KPDSEEQAKIAKLGLKLGLLTSDADCEIEKWEDQENEIVQYGRNM  
SSMAYSLYLFTRGEGPLKTSQDLIHQLEVFAAEG LKLTSSVQAFSKQLKDDDKLM LLLLEINKLIPLCHQLQTVTK  
TSLQNKVFLKVDKCITKTRSMALLVQLLSLCYKLLKKLQMENNGWVSVTNKDTMDSKT